



STRATEGIC INSIGHTS



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Global Trends and Future Warfare



Moran • Rogalski and Struß • Tsyarkin • Li
Parthasarathy • Angstrom • Farrell • Betz • Grissom
Russell • Prunier • Elron • Shamir • Johnson



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We publish scholarly articles as well as viewpoints that address issues of current interest to the makers and executors of US national security policy. We are particularly interested in articles addressing homeland security, WMD/WME proliferation, regional conflict, and the contemporary role of US security forces. The journal seeks articles that will make our readers think, generate discussion, and gain new insight into the challenges and opportunities confronting US policymakers and military operators. Views that run counter to the conventional wisdom or official US government policy are welcomed.

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About the Cover

The cover is based on the four scenarios described in the US National Intelligence Council's *Tomorrow's Security Challenges*, and discussed throughout this issue. From left to right, top to bottom:

- *Great Power Confrontation*: A map of missile ranges made by the CIA during the US confrontation with the Soviet Union in the Cuban Missile Crisis.
- *Concert of Powers*: A poster made by the US government to promote the United Nations.
- *Fragmented International System*: A map of religion in the Holy Roman Empire during the Thirty Years War—both the prototypical example of fragmentation and the crucible of the modern state system. Used under a Creative Commons license.
- *Rise of Non-State Networks*: A lone protestor faces riot police during an Arab Spring protest. Used under a Creative Commons license.



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GLOBAL TRENDS AND THE FUTURE OF WARFARE 2025

Proceedings of a workshop conducted by the
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Center on Contemporary Conflict
at the
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Monterey, California

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Global Trends 2025: A Transformed World is available online at:
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US National Intelligence Council

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As in any other scholarly enterprise, all the contributions that follow represent the personal views of the authors, and have not been reviewed or approved by any government agency in the United States or elsewhere, nor by any private institution.

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1. Introduction: Envisioning Future War

Daniel Moran

The workshop whose proceedings are presented here was convened to provide the National Intelligence Council (NIC) with insight into the way war in the intermediate future, meaning the next twenty years or so, is viewed from the perspective of America's allies, partners, and potential adversaries. The group took as its starting point two works by the NIC: *Global Trends 2025: A Transformed World*, which seeks to identify emerging economic, social, geopolitical, and other forces that will shape the future security environment; and a more specialized study entitled *Tomorrow's Security Challenges: The Defense Implications of Emerging Global Trends*, which draws specific inferences from these trends with respect to defense organization, strategic planning, and the conduct of war.¹ These documents served as read-ahead material for all the contributors, who were asked to consider how the issues they posed were viewed from elsewhere in the world, either in general or with respect to a range of specialized issues (cyber war, irregular warfare, access and area denial, nuclear proliferation, humanitarian intervention) of particular concern to the United States.

The general theme of the workshop was the influence of global economic, technological, demographic, and other trends on the likely forms that international violence will take in years to come. *Tomorrow's Security Challenges*, prepared for the DoD's 2010 Quadrennial Defense Review, proposed four alternative scenarios that, should they come to pass, will represent significant shifts from today's global security environment. These four scenarios provide four alternative contexts in which the future of warfare may be considered. They can be summarized as follows:

- The *Concert of Powers* scenario describes a future in which the growing number of powerful states strengthens the international community's ability to deal with future security challenges, creating opportunities for the United States and its allies to forge new multilateral security partnerships.
- The *Fragmented International System* scenario postulates a security environment in which the diffusion of global power makes it more difficult for the international community to achieve consensus on managing global security challenges such as nuclear proliferation, terrorism, and energy security.
- The *Rise of Non-state Networks* scenario envisions a future in which the dispersion of power and authority away from nation-states gives rise to a myriad of security challenges involving sub-national and transnational entities.
- In the *Return of Great Power Confrontations* scenario, the future security environment is defined by increasing competition between rising and status quo global powers for resources, markets, and influence.

Each of these scenarios poses distinct security challenges for all states in the international system. These challenges will in turn drive strategic requirements, defense budgets, alliance relationships, and military capabilities in diverging directions. It was well understood by all contributors that none of these "alternative" futures will actually unfold as hypothesized, and also that they are not mutually exclusive. Each is basically a thought experiment intended to identify critical pressures on the future

¹ *Global Trends 2025* can be found at http://www.dni.gov/nic/NIC_2025_project.html. *Tomorrow's Security Challenges* appears as Appendix A of these proceedings.

conduct of war. Up to now, these thought experiments have been conducted chiefly from the point of view of the United States. The aim of this workshop was to broaden the terms of the experiment, by considering these alternative futures as they might be viewed by other important international actors.

Within that framework, workshop participants were asked to keep four generic questions in mind as they addressed their particular topics:

- What features of war and warfare in the present can we expect to persist into the future, and which can we expect to fade or transform into something new?
- What current, emerging, or foreseeable social, economic, and political trends, within and beyond the traditional security arena, will drive changes in warfare and conflict over the next 15-20 years?
- How is American thinking on the evolution of modern warfare perceived internationally?
- What new concepts and doctrine for future warfare are emerging among current and prospective violent actors (both states and non-states) around the world?
- The remarks below are not intended to anticipate or summarize the contributions that comprise the remainder of this report, but to highlight some of the themes that bind them together. As will be apparent, all the contributors approached their task in a spirit of cautious self-confidence, based on some shared assumptions that are worth making explicit:
- The past is, within limits, a useful guide to the future.
- The basic character of the world system over the next twenty years will depend mainly on the conduct of its strongest members.
- The preservation of global order is critically dependent on the continued health, increasing integration, and responsible management, of the world economy.

By way of introduction, each of these deserves some preliminary comment.

The Modernization of the Future

It is surprising how many works in security studies begin with the claim that the future is uncertain, and more so than it used to be. This claim often turns on false memories of the Cold War, when world politics is sometimes imagined to have boiled itself down to a well-understood process of stately bilateral confrontation. On that basis the whole idea might simply be dismissed as foolishness. Viewed more generally, however, it is an observation worth pondering. Strictly speaking the future is always unknown, and no more so at one time than another. Yet there is no question that attitudes toward the future, the extent to which it is viewed with complacency, eagerness, or apprehension, have varied a good deal.

For most of human history people have tended to assume that both the past and the future resembled the present, and that human existence played out against an unchanging background defined by nature, divine providence, or some other power beyond humanity's ken. There have, however, been times when people have believed the past was better than the present, and that mankind should do its best to recover the wisdom it had lost. The European Renaissance was such a

period. The so-called scientific revolution that followed, whose methods were inspired by the more inquisitive attitude toward the historical record that the Renaissance exemplified, reversed this attitude. New modes of thought emphasizing dispassionate inquiring and universal theory promised a future that would be better than the present, if only the inherited errors of the past could be overcome.

More recently, the confident expectation of progress that modern science seemed to promise has been modified by the actual experience of life lived amidst increasingly rapid social and technological change. Modernity has not proven to be a steady march toward a better future, but a hard and unexpectedly violent struggle to adapt to circumstances in which, as Karl Marx foresaw, “all that is solid melts into air.” Attitudes toward both the past and the future have accordingly become ambivalent and inconsistent. People still expect to learn from the past, and have been admonished by George Santayana that a failure to learn its “lessons” will condemn them to repeat the course. Yet “dwelling on the past” or (worse) “living” in it, are always bad things, as is “fighting the last war.” People mostly spend their time thinking about the future: what they will do, what they hope for, what they fear. But all they really know, all they have to go on, is the past, which no one expects to happen again.

Modern attitudes toward the future are thus marked by strong apprehensions of discontinuity, moderated by a residual confidence that humanity does possess cognitive and technical resources that give it a fair chance of improving its lot, if only they are applied correctly. In the realm of strategic planning, which is the concern of this workshop, these competing outlooks have long-since resolved themselves into a desire to avoid surprise through the application of systematic information gathering and analysis. It is primarily toward this end that military planning staffs and intelligence agencies have striven for the last century and a half. It has proven a surprisingly thankless task. As can easily be shown, none of the major geopolitical events associated with the cold war—including its transformative conclusion—were foreseen by the intelligence agencies of the major powers. Such short-comings are now routinely deprecated as “intelligence failures,” a phrase that is threatening to become the all-purpose explanation for why, in politics, things often go wrong.

What the phrase actually reveals is a misunderstanding of what we can realistically expect from our efforts to foresee the future. There is, first of all, an element of circularity in the problem that must be acknowledged: surprising events are, by definition, events that defy our expectations. More broadly, however unfathomable such episodes may seem while they are being experienced, in retrospect they are always freighted with an enormous load of historical contingency, turning upon a range of choices, personalities, and local conditions that could just as easily have turned out differently. To say that any given surprise might have been avoided may be true. But to imagine that surprise itself can be overcome—and with it one of the defining features of modern life—is to defy an overwhelming historical record, and perhaps the limits of human knowledge itself.

This project is not about avoiding surprise. It is about correctly contextualizing it, so that when it occurs—and it will—our chances of mastering it will be improved. The value of such improved understanding should not be exaggerated. There are waves that the winds push, and there are tides that the moon pulls. Both can be studied, and must be. Yet it is a fact that the wind can change direction in ways that the best science cannot foresee. It is also a fact, as every sailor knows, that the waves can sink you even if the tide is setting in your favor. Nevertheless, the tides are worth studying too. This project has much to say about the waves that roil today’s politics; but in the end its subject is the tides.

Global Power and Global Order

Ocean tides have proven more amenable to systematic investigation than waves because people have realized that tidal movements are determined by the orbit of the moon. But what if there is no moon? Or many moons? Not the least difference between social and natural science is that, metaphorically speaking, finding the moon is a lot harder in politics than it is in astronomy. Even so, all the contributors to this project accept that the preeminent gravitational force shaping global politics in the intermediate future will arise from the interests, conduct, and values of the strongest states in the international system. In this they have placed themselves firmly on the side of those who believe the future will resemble the past. Yet there are also features of the present that are unusual in historical terms, and worth noting for that reason.

There have been few if any periods in the past when global power has been distributed as incongruously as it is today. At present the military capabilities of the United States are unmatched by any plausible combination of other powers, and are likely to remain so for decades to come. For the rest of the world, military planning is dominated by the requirements of maintaining local order (which can be considerable), and by the prosecution of parochial rivalries over territory, irredentist populations, and so on. Beyond that, all that remains is the problem of adapting to American strength—by obtaining nuclear weapons (Iran, North Korea) or devising niche capabilities (China) designed to hold the US at bay; by maintaining amiable relations despite hard feelings about failing to do one's share (nearly all current American allies except the UK); or by trusting that America's sobering experiences in Iraq and Afghanistan will dissuade it from using force against countries unable to defend themselves except by throwing the bodies of their people in the way of American forces.

This unprecedented distribution of military power contrasts markedly with the rapidly increasing and equally unprecedented diffusion of global wealth. This is not to suggest that we face a future in which the conditions of rich and poor will converge—in human terms the opposite appears to be the case—but rather that the international system is becoming increasingly populated by states who have consciously or implicitly chosen to maintain military capabilities far below their inherent capacities. The European Union, a treaty organization whose members collectively comprise the world's largest economy, is the outstanding example of this, but not the only one. Excluding the United States, global military spending has been declining for years, despite the fact that the world can now afford more “defense” than ever. The optimistic, and arguably the most plausible, interpretation of this development is that it reflects the marginalization of war itself, at least from the point of advanced societies, who may be reaching the conclusion that they have little to hope for from the use of force, and also (more problematically) little to fear.

It is at any rate striking that, among the alternative futures that provided the starting point for this project, the one that came in for the least attention among workshop contributors was the “concert of powers.” This neglect was not owed to any expectation of great power conflict (a scenario that was almost equally neglected), but rather from the perception that there are no “powers” (plural) to concert. Conversely, the scenario that cast the longest shadow over the workshop's proceedings was “fragmentation,” a condition that would arise if one or more strong states were to decide that prevailing forms of political and economic interaction had become disadvantageous to it. In this context the most likely protagonist—perhaps the only plausible one—is China, whose historical traditions are not conducive to multilateralism and collective security, but whose recent, trade-driven economic growth is pushing it firmly toward increasing engagement with, and commitment to, the world system. Exactly how this contest among Chinese cultural habits and economic interests will

play out is one of the two outstanding questions whose answers will define the basic structure of global politics.

The other is how much longer the United States can continue to play the role of systemic guardian and guarantor, and what will happen when it finally lays its burden down. *Pax Americana* was not among the alternative futures the contributors to this project were asked to consider. On the contrary, all realistic conceptions of the global future recognize that American power must wane in relative terms. Judging the limits of its willingness to play the constabulary role that it has assumed in recent years will undoubtedly challenge the good judgment of the rest of the world. Absent an obvious and worthy successor (as the United States provided to Great Britain), new institutions to promote and enforce international cooperation will be called for. It is hard to imagine such innovation occurring absent American leadership. Failure to provide it will leave its legacy in uncertain hands.

Globalization and its Enemies

It will be apparent from the preceding discussion that, however essential military power remains to the maintenance of global order, it does not constitute the essential glue of global politics. That glue has been provided, for some time now, by the progressive integration of the world economy, a process that (to speak in measurable economic terms) began in the middle decades of the nineteenth century, was interrupted by the world wars, and resumed in the early 1950s. It has accelerated decisively since the end of the Cold War, whose ideological shibboleths presented a modest but palpable obstacle to its progress. Economic integration is in turn at the heart of the more general and nebulous process of “globalization,” a term encompassing the increasingly unrestrained international movement of money, goods, information, and (more ominously to some) people.

No one doubts that the increasing volume and speed of transnational activity pose risks to its participants. Globalization affords its beneficiaries new means of harassing, surveilling, and harming each other, deliberately or not. Significant risks can attach to such actions, particularly in the economic sphere. The line between hard bargaining and strategic coercion can be surprisingly faint, and mistaking its location has proven calamitous in the past. Economic decisions, once made, can generally be unmade, with penalties for foolishness or overreaching paid in arrears. Such decisions acquire a different character, however, when market participants attempt to use their market position in lieu of force, to coerce a result that the market itself refuses to produce. Such actions, like the use of force directly, can acquire a finality unknown to other spheres of public life. The extent to which economic integration may entail strategic risk, or invite strategic risk-taking, has been well recognized since the end of the First World War. Nothing in present circumstances should be mistaken for evidence that this risk can safely be ignored.

Nevertheless, contributors to this workshop remain convinced that, within the period they have been asked to consider, recourse to war is less likely to occur among the beneficiaries of globalization than among those who have been left out of it, whether from political incapacity, cultural resistance, or simply because they have nothing to trade. That the advanced world should seek to craft policies to encourage the integration of those left behind is too obvious to require much comment. The more difficult question is how, and how far, it should intervene to discourage recourse to war on the periphery of the system, either from fear that it will spread toward the center, or in response to the qualms that such atavistic and transgressive violence may arouse in world opinion.

The contemporary preponderance of “irregular” warfare, terrorism, massacre, and so on, is partly owed to the fact the other kinds of war have lately retired from the scene. War now arises almost exclusively in regions where even the regular forces of organized states possess only limited capacity for sustained conventional operations. Since 1945, war has never pitted two genuinely capable belligerents against each other; though it has sometimes brought the weak and the strong onto the same battlefield, often to the frustration of the strong. It is possible that this spectacle, however disheartening, may simply be further evidence that war’s value as an instrument of policy is now so steeply discounted by advanced societies, compared to the other instruments at their disposal, that it is of interest only to the disappointed and the marginalized. There are some, however, who fear that, by a malign quirk of fate, the weak will inherit—or at any rate consume—the earth that the strong have made.

Even the weak may now obtain weapons of immense destructiveness, most ominously nuclear and biological, but also conventional arms in sufficient quantity to pose a grave threat to the civil populations, if not to the armed forces, of advanced countries—not to mention the people on whose behalf they purport to fight. Western armies puzzle over how large a share of their resources and mental energy they should devote to the suppression of such fighting. Their task is complicated by the knowledge that the stakes for their own societies in such conflicts are in most instances (Israel being the obvious exception) liable to be so low as to subvert the political will to accept, and inflict, the suffering that will always be involved. This complex calculus is a source of strategic leverage for the enemies of global order, who take for granted the reluctance of the guardians of order to use the overwhelming power at their disposal. This can be a dangerous bet, as anyone who has seen a photograph of Dresden in the spring of 1945 will know. Yet it is one that has paid off in the past, and will presumably continue to do so from time to time, as long as international violence remains confined to the margins of the system; and as long as the stakes really do remain low.

Future Warfare: Possible Developments from a European Perspective

Dirk Rogalski and Karsten Struß

Optimism is most usually the effect of an intellectual error.

-- Howard Q. Quint

Although the quotation above by Howard Q. Quint is taken out of context, it indicates what might happen if our analysis of potential future developments proves incorrect. An analysis that ignores certain developments and potential future risks might find us caught by surprise and left unprepared to counter new threats. This paper is laid out to outline the European view on how the security environment might change in an increasingly globalized and multi-polar world, and how that might impact the future of warfare in the next fifteen to twenty years.

When we say “European View” we do not intend to claim that we speak for Europe in any official capacity. What we would like to share with you is our own interpretation of European strategic documents and scholarly work on this issue. The two main documents we consulted are the *European Security Strategy 2003* with its *2008 Implementation Report*, and the European Defense Agency’s *Long Term Vision for European Defence Capability and Capacity Needs 2006*. Taking these documents as the starting point, we will then analyze the developments within the different dimensions of the strategic environment that determine the design of any strategic vision.

Since the authors have worked with the North Atlantic Treaty Organization (NATO) and the European Union (EU) for the last twenty years at the strategic, operational and tactical levels, this interpretation will also reflect practical experiences. And of course you might expect a bit of a German touch. This is mainly because Europe still has a hard time coming up with a common view that is shared, accepted, and interpreted in the same way by all twenty-seven member states of the EU. “Unity in Diversity” is one of Europe’s greatest assets but also its greatest challenge when it comes to decision-making in high politics and crisis management.

Before we start to analyze what Europe’s vision for the midterm future is, we need to understand some particularities about the EU:

- The EU is not a nation-state. Its five hundred million citizens come from twenty-seven member states. The EU does not have a constitution but is based on treaties.
- The EU is not an alliance like NATO. There are many policy areas that fall under the auspices of supranational bodies like the European Commission and Parliament. Decisions by these bodies are treated as secondary legislation and are binding for member states.
- Decisions regarding security and defense, in contrast, have to be made unanimously by the member states. Up to now the EU has been unable to enforce common strategies, common positions, and joint action in the area of security and defense.

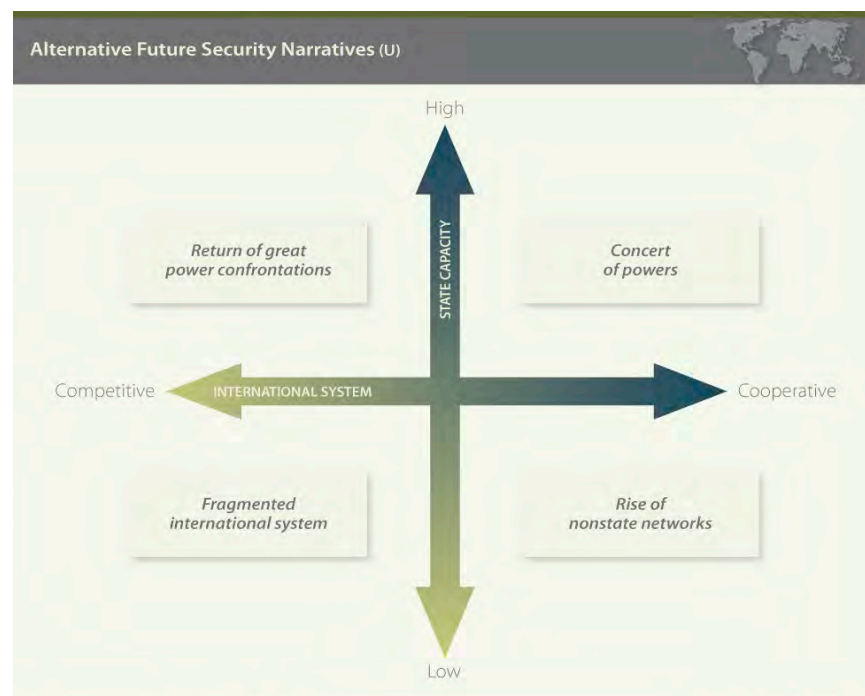
These characteristics show that the EU is based on effective multilateralism. Effective multilateralism has worked for the EU. The EU’s economic strength and the EU’s security depend on a functioning multilateral system and effective multilateral institutions. Whether this concept will still be valid in the future is inevitably subject to debate.

The return of power politics, perhaps triggered by unilateral decisions of major global players or the failure of multilateral institutions, is a direct threat to European security and prosperity. Unilateralism is an attack on European beliefs and threatens the very foundations of the EU. It might also endanger the most valuable strategic asset that the EU has provided to the US in the past decades—peace in Europe.

This, in a nutshell, is the framework and the foundation in which the EU has to operate, and it is not likely that this framework will change dramatically over the course of the next twenty years. Over the last two decades, security and defense have become areas of increasing effort within the EU. The EU has taken over responsibility for operations, as in the case of the Democratic Republic of Congo and the *Operation Atalanta* to combat the threat of pirates off the coast of Africa. It has set up the EU Battle Groups as a system of quick response forces that are highly mobile and capable of coping with smaller operations. Taking the limited time frame into account, the achievements in this field are remarkable but, still, far from sufficient to match the threats of the future.

Now let us draw our attention from the current situation to the future and briefly look at the *Alternative Future Security Narratives* provided by the National Intelligence Council (figure 1). The EU certainly prefers a future security scenario located in the upper right quadrant, which means a cooperative concert of powers based on an effective multilateral system capable of dealing with emerging challenges and threats. And the EU wants to be a valued player in this system.

Figure 1: Alternative Future Security Narratives



Currently, the threats identified by the EU are, not surprisingly, the same as those the US has identified:

- Terrorism
- WMD
- Failing States
- International Crime
- Migration
- Energy Security
- Climate

But is this assessment still valid, and will it hold for the next fifteen to twenty years? To answer this question we need to look at the six dimensions that form the environment of strategic planning. These six dimensions, namely the political, economic, social, technological, legal, and environmental dimensions, have to be understood as elements in a network with a high degree of interdependency.

The political dimension

The global political landscape will be characterized by a much higher degree of multi-polarity than we see currently. The problem seems to be that in an increasingly globalized and multi-polar world, the existing multilateral system and its main institution, the UN, can hardly manage the challenges and threats. While the United States will remain a global power, its position will be less dominant and increasingly challenged by other powers. Rising or reemerging states like Brazil, Russia, India, Turkey, and China need to take on more responsibility within this system, become more active, and invest more. Some of these nations will begin to lead globally, like China and Russia. Others will be mainly of more regional importance, like Turkey, which has already begun to increase its influence in the Middle East and will in all probability continue doing so. Globalization will continue and will create a more interdependent world where challenges and threats need to be addressed across borders. Globalization will continue to have winners and losers. And no country alone, not even the West alone, can address these challenges effectively. The West needs the rest, but in many fields it will also face a competitive relationship with these rising powers.

While the US and large parts of Asia and Latin America will remain zones of stability, the prospect for the Middle East and Africa as well as for some parts of Latin America are less promising. Developments in the Middle East and Africa, due to their geographical proximity, will often have direct implications for Europe. Thus, they will be of special interest for Europe. These regions might become or remain zones of instability and, at least for the foreseeable future, will be characterized by a high degree of uncertainty. The EU itself, despite several national differences and its current financial crisis, will remain a zone of stability and increasing integration, with the majority of member states facing no direct military or conventional threats on their borders.

The economic dimension

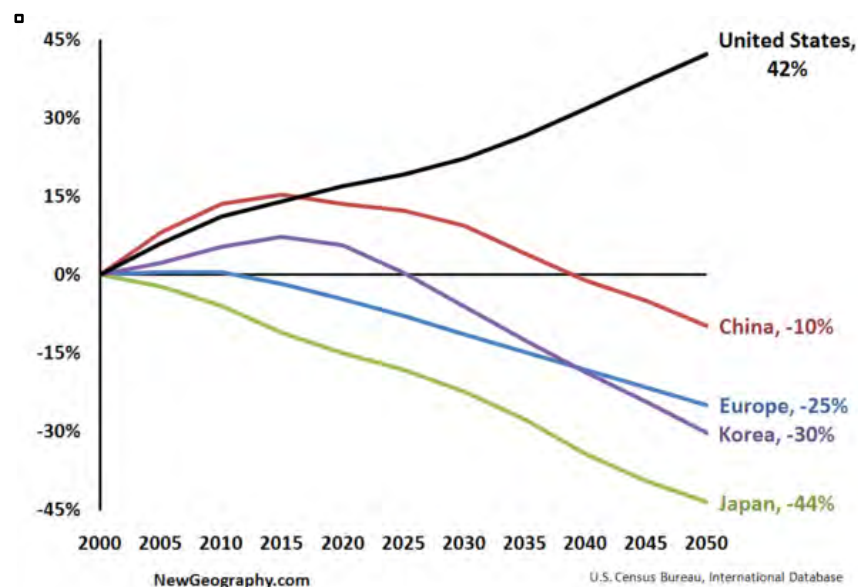
Globalization will remain the dominating factor in the global economic development. This globalization, however, will be characterized by increasing competition for markets, resources, and intellectual capital. The degree of interdependence of the global players will grow respectively, which

will, despite their rivalry and competition, prevent the outbreak of existential conflicts between the global players described above. States in the West, especially in the EU and the US, will be affected by severely limited budgets which will force these states to reconsider their current positions and policies. These budget constraints will also reduce the military capability gap between the West and new global powers over time.

The social dimension

The most influential development in the social dimension of the strategic environment will be determined by the changes in the demographics of Europe. With birth rates decreasing, Western societies will age and at the same time the composition and size of the European population and labor force (figure 2)—with regard to ethnicity, culture and religion—will change. This, in the short term, requires Europe to change its integration policies and, in the long term, to initiate a discourse within society to reverse some of the current trends. The homework many European countries have forgotten to do in the past will require some attention. These developments might lead to significant changes in the self-perception of Europeans and the definition of their identity with direct implications for foreign policy, including security and defense.

Figure 2: Labor Force Growth (ages 15-64)



The technological dimension

The technological developments we have faced over the last decades occurred with continuously increasing speed, and this tendency of ever shorter product life cycles will continue. This tendency of developments in the technological dimension will become one of the major challenges for security and defense. As described above, current decision making processes—especially in organizations like the EU—are not able, and have not been designed, to cope with such rapidly evolving developments.

Moreover, societies all over the world will increasingly be dependent on cyberspace. Cyberspace has started to revolutionize economies, information exchange, and education as well as science and has penetrated almost every sphere of life. Thus, threats will increasingly stem from cyberspace, and cyberspace will also, or actually has already, become a kind of “military platform” that enables leading military operations at all levels of command.

Another technological sector of increasing importance is the use of space-based assets. Communication assets especially are of critical importance for the developed world. Threats to these assets will be threats to the political and economic dimensions as well. European nations, through the European Space Agency (ESA, a non-EU organization), play a leading role in the use of space-based assets and, therefore, are also vulnerable to threats to these assets. This reliance on space-based assets will increase. The EU, together with ESA, has reacted and implemented a strategy for the future use of space. Security, however, still plays a subordinated role in the European considerations. For good reasons, the weaponization of space is strongly condemned by European nations. In addition, some European nations, namely France and Germany, have begun to build up their own space surveillance capability and will continue to Europeanize it.

The technological dimension, however, does not only have to be seen as a dimension of future vulnerability, but also as a dimension of new changes and opportunities to overcome shortfalls in current defense capabilities and to counter threats more effectively and efficiently. Increasing automation and use of robotics can be a way to overcome the shortage of available personnel for the military, to minimize the risk to the lives of soldiers, and to maximize efficiency. In the long run, technology gaps in the military capabilities of the leading nations will close, as stated above.

The legal dimension

New developments, especially in the technological dimension, will impose challenges to the legal dimension of the strategic environment. The increased threat of cyber warfare raises the question of accountability and, also, of an international legal architecture that ensures the enforcement of legal obligations. Arms control and reduction treatments—especially in the fields of weapons of mass destruction (WMD), the military use of space, and also small arms in the developing world—need more attention. This includes regimes to observe the compliance with the respective treaties. Consequently, this raises the question of the role of international institutions, like the UN. This takes us back to the political dimension and clearly shows the interdependencies of developments in the different dimensions of the strategic environment.

The Environmental Dimension

The environmental dimension, finally, influences the development of new strategies mainly for two reasons: the competition for scarce resources and the risks stemming from climate change. Europe itself suffers from a lack of natural resources, which significantly weakens its position in the overall competition with the other global players, especially at times where human and intellectual capital will increasingly become scarce resources taking the demographic development into account.

Water scarcity and food shortages in Africa might have direct impacts on Europe, with a growing number of conflicts and increasing numbers of refugees both inside Africa, and between Africa and Europe. Most of these environmental challenges can't be dealt with nationally or regionally. They

require a global approach. Thus, besides their disastrous consequences, there might be a chance for increased global cooperation lying within these global challenges.

Implications for a future European security strategy

Based upon this analysis, we can draw conclusions and recommendations for a future European security strategy. The overall threat scenario, as described in the analysis, can be summarized as follows: A majority of states in Europe will not face conventional, military threats at its borders. Major future security threats will: occur in cyberspace; eventually arise from the proliferation of WMD; be directed against critical infrastructures, including space-based assets; result from the competition for resources as well as markets; and, finally, produce a potential influx of refugees from potential zones of instability. Terrorism will remain a continuous threat to western societies. The developments in the dimensions of the strategic environment will require Europe to accommodate the following considerations in its future security strategy:

- A new approach to homeland security, defense of territorial integrity, and expeditionary military operations. The fusion of internal and external security has become an accepted fact. The capabilities needed in the field of internal and external security, however, often differ. Moreover, not everybody has to deal with both of these aspects of security on their own. As stated above the majority of EU member states do not face direct conventional military threats to their territory. Thus, defense at the borders of the EU should become a European effort. This includes capabilities to counter the threat of ballistic missiles and threats to space-based assets. Taking the sophistication and costs of means to counter these threats into account, these capabilities should be called “European” capabilities, too. Moreover, cooperation with the US in this field might be of mutual interest and, at least for Europe, of high importance and a *conditio sine qua non*.
- The same applies to expeditionary military operations. This will enable the EU to build up sufficient capabilities while, at the same time, sharing the burden for these sophisticated—but expensive—capabilities. Taking the current conflict of national interests within the EU into account, this objective can’t be achieved in the short run. However, budget deficits in the US and the challenge imposed by rising powers to the US will require the Europeans to take care of themselves.
- Homeland security and defense, in contrast, should remain a national responsibility in a European network. Taking the nature of the most severe threats to homeland security into account, however, the role of the military should be reconsidered. Capabilities for countering such threats as cyber attack and terrorism do not necessarily have to be managed and provided by the military.
- This division between EU and national responsibilities, nevertheless, does not exclude EU-wide cooperation and coordination in the fields of national responsibility. On the contrary, it is the opposite that is required.
- There will be continued financial pressures on security and defense spending. Security spending will be favored over defense spending because it is more acceptable to the public.
- Taking demographic developments and budget constraints into account, European militaries in general will struggle in the competition with industry and other areas of the public sector for personnel. Thus, military capabilities will increasingly have to be based on automation and reliance on technology.

- Limited military capabilities on the national and European level will directly influence the future ability of the UN to mount UN-mandated military operations. That means, from a European perspective, that the UN's weak capacity to provide collective security by means of military force will remain. This is not necessarily a bad thing, because most of today's challenges and threats cannot be addressed by military force alone. Even if you happen to have a big hammer, not every problem is a nail.
- This understanding must lead to changes in the role played by force. Today and in the future, the use of force will be intimately interwoven with political developments applied against an obscure opponent under tight rules of engagement and closely monitored and scrutinized by the media and the public.
- That means operations will often be expeditionary, multinational, and multi-instrumental, and designed to achieve security and stability, and not necessarily military victory as traditionally understood.
- Information in this kind of operation will be key. Information can provide the opportunity for quicker decision-making but does not guarantee better decisions. The efficient utilization of technological as well as human assets is key to successful intelligence and will directly influence future military capabilities.
- Asymmetry will not only apply to tactics but also to aims and values.
- Military force will only be one of the instruments applied to achieve campaign goals. And again, when force is used it has to be proportionate, justifiable and legitimate.
- Nevertheless, Europe will remain very cautious about military intervention. Proportionality and political legitimacy, primarily in the form of extended multilateral endorsement, will be paramount. Europe will remain risk-averse.
- The focus of military efforts for Europe will shift to
 - Supporting diplomacy in preventing war
 - Discouraging parties who generate crisis
 - Supporting civilian crisis management instruments
 - Containing conflict
 - Providing territorial defense.
- The last point could be questioned, because the plausibility of interstate warfare between comparable opponents, in general, is reduced. Except perhaps for the US and to some degree for the EU, which have the most capable forces, most players would seek asymmetric strategies. And most effective in this area will be non-state players because they don't have another option and are not restrained by the law of armed conflict.
- In this scenario the technological revolution does not always play to the advantage of state actors. In a globalized world proliferation of technology is often beyond the control of governments. The sustained unilateral technological advantage of state actors over non-state actors cannot be taken for granted.

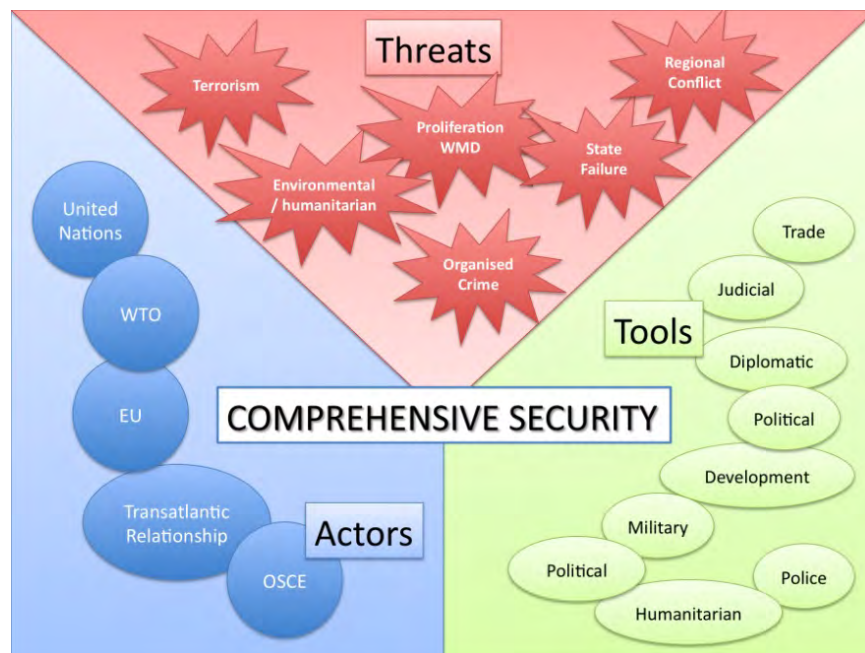
Conclusion

So, does Europe share the strategic assessment and vision provided by the National Intelligence Council? As we have demonstrated, Europe and the US have identified in principle the same threats and challenges to security. We agree that from the four Alternative Future Security Narratives, scenarios can be derived to analyze key security issues. The narratives are useful for framing thinking and debate. However, we all realize that these narratives will not be as pure in the real world as they might appear in the academic one. The real world security environment will present itself as a mixture of elements from all these narratives.

No matter to which quadrant the world order shifts—and this might be very hard to predict without a crystal ball—in none of the quadrants will the threats and challenges be military alone and they cannot be resolved by military force alone. Therefore, we feel that it is of utmost importance to have a variety of civilian and military instruments available, which can be tailored to address different security threats and challenges and which must be employed in an effective multilateral system.

This means that we should focus less on the symptoms and more on the root causes of threats. This in turn means that the focus of providing security has to shift from the military to civilian instruments, particularly in crisis prevention, crisis management and post-crisis reconstruction. That does not exclude the use of military force in certain scenarios to support civilian efforts or to show necessary resolve. Nevertheless, we always have to realize that the military can perhaps manage a crisis, but not solve it. What is needed is a comprehensive approach to security that provides multilateral institutions with a mix of instruments, including military force, that can be tailored to a specific threat or challenge (figure 3).

Figure 3: Comprehensive Security



Source: Schmid and Doering, 2008

Of course, this approach works best and is probably most effective in the concert of powers scenario, but it is unlikely that there is a valid alternative to this approach if world order shifts to a less benign quadrant of the narratives.

For Europe the adoption of this approach is the only way to remain relevant as a security provider. In the changing strategic environment, Europe is on the edge of either remaining a global player or being increasingly marginalized. For the time being, its economic power will enable Europe to maintain global importance at least in the short to medium term. Taking the growing importance of other players on the one hand, and Europe's shortage of natural resources, budget deficits, and demographic decline on the other hand into account, the only option for Europe is further integration and a functioning multilateral system, both internally and externally. The alternative is an increasing marginalization of Europe and in the worst case a breakdown of the European multilateral system with probably devastating consequences.

3. *Casus Belli*: The Case of Russia

Mikhail Tsyarkin

How do the Russians view possible causes of future wars? Over the course of the last century, Russia has presented forecasters with several major surprises. Therefore, it would be also at least prudent to produce two prognoses: one derived from what we know about the people who run Russia now and may run it for the next two decades (I will call it the Putinist elite), and another one, which assumes one of those surprises characteristic of the Russian history.

Several factors that are crucial for Russian views of the future warfare are not likely to change.

- Today's Russia, even reduced territorially, economically and demographically from its Soviet and Tsarist Russian predecessors, is still an empire. Ethnic Russians constitute about 80 percent of the population of the Russian Federation. The remaining 20 percent identify with the Russian state to a lesser degree, especially the Muslim minorities of the North Caucasus.
- The Russians have been traditionally preoccupied with defensive space. After 1991, they have added to this preoccupation a post-imperial neurosis focused on the former Soviet republics and, to a lesser degree, former Eastern European satellites. Even though often dependent on Russia economically and even militarily, none of these states has become a reliable ally of Russia, as demonstrated by their failure to recognize the independence of South Ossetia and Abkhazia in the aftermath of the Russo-Georgian war in August 2008.
- Russia is unique among other major energy exporters. It can fully provide for its own energy security. Russia is a nuclear superpower, which puts it, as far as the measurement of its destructive might, in the same category as the United States. Russia has a tradition (which it wants to maintain) of being an active international actor on the global scene, something not characteristic of other major energy exporters. Russia is a very significant arms exporter, in fact, second after the United States. It is also a space power with some unmatched capabilities: once the space shuttle is retired in 2011, Russia will be the only country with the reliable capability to put humans into space.
- Russia is experiencing severe demographic problems—even if its population did not decline in 2009 (for the first time since 1993), experts predict that the population will begin to decline again.¹
- Russia's size and location mean that its security interests are so varied that it would be nearly impossible to accommodate them within a system of international security not centered on Russia.

The above factors have shaped the Russian elite's perceptions of the causes of war in the future. These characteristics may not dramatically change over the next two decades, although, as I will discuss below, many observers believe otherwise. So apparently do many members of the Putinist elite, and hence their fears about the viability of the Russian nuclear deterrent when faced with the developing American missile defense programs.

Russia's threat scenarios are partially rooted in the exaggerated (sometimes painfully so) sense of Russia's importance in international affairs and of the Western world's hostility to Russia. This is particularly true when it comes to Russian interpretations of American politics and policies, the most prominent example being the Russian obsession with American missile defense program. I do not

have an explanation for this phenomenon, except that it may be a psychological compensation for the loss of the superpower status, and also mirror-imaging of Russian preoccupation with the US. This psychological factor, often dismissed in the West as “paranoia,” should by no means be overlooked.² (Examples: Putin and others on “Brzezinski’s plan to partition Russia,” Gates asked about the alleged quote (alternatively by Madeleine Albright or Dick Cheney) that Russia is too rich in natural resources and therefore should be forced to “share” them with others. These examples can be continued.)

Despite Russia’s desire to continue its role as a global international player, in reality Russian security concerns are focused on Russian interests in Eurasia. The Putinist elite is preoccupied with the possible linkage between internal “enemies” (i.e., ethno-religious separatists) and external powers, which may want to cooperate in order to partition Russia. (Vladimir Putin has articulated such concerns on several occasions.) Such fears bring with them inevitable concerns that powerful external actors (both state and non-state) that could supposedly benefit from such a partition, would actually facilitate the process of Russia’s disintegration. (It does not help that Putin has managed to extinguish the fire of the open war in Chechnya only by turning it over to a local warlord who is turning it into a *de facto* Islamic state.)

Therefore, Russia may anticipate internal conflicts escalating from terrorism to cross-border regular warfare. Following this logic, Russia should prepare for two types of conflicts at once: both counter-insurgency and conventional conflicts against opponents equipped with modern weaponry.

The August 2008 war against Georgia could serve as the model of the Russian threat perception regarding the former Soviet republics. Russians tend to view these new nations with barely concealed contempt. They also expect (with good reason) these nations to nurture grudges against Russia because such grudges can be useful to politicians there. Since the new states are much weaker than Russia militarily and economically, they seek protection from the West. Once they obtain such protection, they begin to challenge Russia. Such challenges cannot go unpunished. The danger, from the Russian standpoint, is that the US and NATO might become involved in such conflicts. The Russians assume that in 2008 President Mikheil Saakashvili of Georgia fully expected the US to come directly to his aid. Had this happened, Russian choices would have been to back down (and encourage other post-Soviet nations to seek protection from the US), or risk defeat at the hands of the US conventional forces, or risk nuclear war.

Russian views of the causes of future wars suffer from a serious contradiction. While fear of the US appears to shape these views much of the time, the United States is treated as a useful ally in containing the possible spread of Islamic fundamentalism from Afghanistan. But even the fear of the fundamentalist surge into Central Asia has not stopped Russia from trying to sabotage American long-term presence in that region.

The unmentionable elephant in the room of Russian discussions of the future is China. This suggests to me that Russian concerns about China are quite serious. Russian leaders do not understand China and fear it.³ Russia’s demographic weakness and its resource riches feed suspicions in Moscow that China, whose appetites for natural resources are well known, would eventually encroach on the Far East and Siberia. The Russian armed forces regularly conduct major exercises in the Far East, where the most likely possible opponent on the ground could be China. It appears that the most likely threat scenario is not an outright attack, but rather crawling into an armed conflict as a result of increased Chinese migration into the Far East, where they would outnumber Russian citizens and gradually claim political power and begin to take orders from Beijing, rather than Moscow, whose control over the Far East has never been particularly strong.

Do the Russians believe that they have a conventional capability to deter or repel the Chinese? They probably do not, given the demographic realities and the inability of the Russian defense industry to manufacture high tech weapons that would completely outclass what the Chinese have or will have soon. Therefore, nuclear deterrence would remain their only realistic option for preventing a Chinese armed encroachment, while a full-blown military confrontation would be nothing short of a disaster.

How may Russia view the evolving international system and its place in it?

Russia has been increasingly integrated into a global market economy. It has not done so, however, in the area of security and foreign policy. It can afford a certain degree of strategic loneliness because of its strengths as a nuclear superpower and major energy exporter. Russian domestic politics also contributes to its relative isolation – or full sovereignty, as Putin would put it. Integration into international institutions requires following the rules of transparency and political fair play. Russia is one of the most corrupt countries in the world; the main purpose of its political system is to enrich bureaucrats and associated businessmen. Transparency and application of the rule of fair play are a mortal threat to the stability of this system. The Russian political tradition can be safely described as the realist one, permitting active engagement in international institutions only in as far as they serve Russian interests. Viewing the world through the realist prism, the Russians began to challenge from the early 1990s on, and initially only intellectually, the American vision of the New World Order. They argued that the idea of a unipolar world made no sense, and that instead bi-polarity would be replaced by multi-polarity and conflict over access to natural resources. Incidentally, they would probably agree with Donald Trump's suggestions that the US should have seized Iraqi oil – after all, they believe that the war in Iraq was precisely about seizing its oil resources.

The influx of Western ideas into Russia after the Iron Curtain was lifted has not resulted in an adoption of liberal internationalist ideas by the ruling elites. It is hardly surprising that the Russians mostly picked up a rather crude version of geopolitics that fit into the suddenly empty mold of the Soviet ideology. Instead of the global class struggle, yesterday's instructors of Marxism-Leninism are now teaching that nations are in the process of a natural and perpetual conflict over resources, living space, etc. One should also note that the faith in international institutions was severely damaged in Russia together with the rest of the liberal package of ideas presented by Mikhail Gorbachev and then pursued (at least for some time in foreign policy) by Boris Yeltsin. Thus, Russia has stayed aloof from the liberal reorganization of the international system that the West has embarked upon after the end of the Cold war.

The Russian elites would become more positive about international institutions and real cooperation if the factors that have so far kept Russia strategically aloof change – as they are likely to do.

Russia suffers from a profound political, social and economic malaise. It has been unable to find a reliable way forward. In the 1990s Russia tried the Western model of democracy and market economy, and it didn't seem to fit Russia's needs. During the last decade, Vladimir Putin pursued policies, mixing traditional Russian statism and nationalism; this worked for some time but now their popularity is declining as well.

After the heady years of 2000-2008, when it seemed to the Russian elites that rising energy prices would solve all their problems, this view has changed even among the Putinists. Even official experts, such as the Minister of Finance Alexei Kudrin, say that further economic growth cannot be achieved by relying solely on energy exports. The Russian government is concerned about its ability

to produce new armaments for its military and is planning to pour huge amounts of money into the defense industry. There is little optimism about the results of these plans, and Mr. Kudrin has warned that the Russian budget cannot afford such expenditures.

Russia can no longer be an autarkic weapons manufacturer. This is likely to have a serious impact on the international security environment. The Russians will have to enter into co-production agreements with other nations or simply import weapons, as they are already doing with the Mistral amphibious assault ships from France. It is noteworthy that Moscow appears to have become more cautious about arms exports to China. Their choice of partners in arms trade is likely to affect the international security environment: it may make Russia and NATO nations mutual hostages to their arms trade, or Russia may come to the conclusion that it depends on their partners too much to even contemplate the possibility of a conflict with them. Alternatively, Russia may decide that its arms business is too valuable for NATO members and that the Kremlin's hands therefore are untied when it comes to dealing with its pesky small neighbors.

Domestic observers with increasing frequency question Russia's political stability. The situation has been well described by an astute Russian analyst:

Russia is undergoing a latent revolution. It resembles a peat bog fire. The fire is burning somewhere deep, burning tree roots, acid smoke seeps from underground, here and there people fall into holes burnt through the ground and perish, but then on the surface the forest with burnt roots looks quite decent. ... Today's Russian society and state are such a dead forest. Wherever you look, you can see the masts of state institutions and the underbrush of laws, but there has been no life in them for quite some time.

Chaos is the fundamental systemic characteristic of the condition of the current Russian society. The vertical of power has completely degenerated into its complete opposite, the horizontal of anarchy. The main problem of Russia is that no political or administrative decision, irrespective of who gives it, cannot be implemented.⁴

The fact that President Dmitri Medvedev, handpicked by Putin, has chosen to distance himself at least rhetorically from his mentor suggests a considerable degree of unease about the future. The factors that have allowed Russia to be strategically self-sufficient may very well change for the worse in the future: reliance on energy exports may no longer be sufficient for economic stability, substantial conventional military capability may no longer be achievable, and nuclear parity with the US (whatever this means) may be lost, or at least perceived as lost. Such change may mean an attempt to close the gap with the West and to turn Russia into a more cooperative (from the American point of view) actor in the international system. This may be more likely if conflicts are avoided in the sore spots of South Caucasus, Ukraine and the Baltic States, while China continues to loom large over the Far East and Siberia. This prediction of positive (from the American standpoint) developments, however, may run into a great uncertainty at the heart of Russian politics.

There is no coherent Russian perspective on the future, on the past, or on the present. Twenty years after the collapse of communism, Russian opinion is deeply split between the relatively few who see Russia's future in the West, and take their cues from Western values and intellectual fashions, those who prefer to see Russia as a self-contained civilization, and those (the vast majority) who do not have a well-formed opinion on such matters.

There is a sense of an intellectual void, of doubt about Russia as a culture, as a nation, and as a state – a doubt manifested not only by the flight of capital, but by the flight of the future – the tendency of the well-to-do to send their children to study and live abroad. The educated Westernized elites view their own people (*narod*) with hopelessness and fear; critical as they often are of Putin and his regime, one regularly hears concerns that Putin's regime may be replaced by something much worse. The outburst of the Russian nationalist violence in December 2010 near the Kremlin has frightened both the ruling elite and its Westernized opposition, which is always mindful of Alexander Pushkin's dictum: Beware of the Russian rebellion, senseless and merciless (figure 1).

Figure 1



Source: <http://zyalt.livejournal.com/330396.html#cutid1>

One of the most disturbing experiences in Russia today is going to a bookstore and looking at the selection on history and politics. While much has been done to publish quality works on these subjects, bookshelves are dominated by conspiracy theorists, Stalin's apologists, various deniers of historical facts, and such. Perhaps one of the greatest challenges to our ability to predict Russian actions in the longer term is the decline of the Russian intellectual life. Meeting younger Russians at international intellectual gatherings, one may easily think that I am exaggerating: they are accomplished and Westernized. But there are different strands of cultural and political life in Russia. There is the School of Sociology at the Moscow State University that teaches something called Orthodox Sociology and houses the Center for Conservative Studies, led by one of the most radical personalities in Russian intellectual and political life, Alexander Dugin. Dugin promotes ideas of Russian racial and cultural superiority, and has on several occasions called for criminal prosecution of intellectuals who engage in the dialogue with the West. There is also a professor at the Academy of General Staff who publishes one book after another on the subject of a world Zionist plot.

Despite all the reforms instituted by Minister of Defense Anatoly Serdyukov, it is impossible to get rid of the eminent “political scientist” Tatyana Gracheva, whose professional background is as a French language instructor. Or just look behind the diplomatic façade of the Ministry of Foreign Affairs: the website of the Ministry’s journal *International Affairs* reacted to the death of Osama bin Laden with an article by the journal’s staff writer expounding various conspiracy theories and accusing the US of “state terrorism.”⁵ And this witches’ brew is inevitably laced with a heavy dose of paranoid anti-Americanism.

It would be foolhardy to ignore such trends, while it is admittedly difficult to make forecasts on their basis. As a minimum, we cannot exclude the chance of an extreme political movement or movements destabilizing the domestic situation, aggravating ethnic conflicts within Russia, and perhaps stirring up armed conflicts with Russia’s small neighbors.

To summarize, the Russian expectations about the role of armed conflict in the future and the ability of the international system to prevent them are generally pessimistic. The Russian thinking is focused on smaller conflicts around Russia’s periphery and on preventing the major powers from getting involved in these conflicts against Russia. The obvious exception is the Russian vulnerability in the Far East to the growth of Chinese power – while the Russians do not see China as bent on a military conflict there, the economic and demographic disparity, as well as the disparity in natural resources, create a potential for an armed conflict.

The future development of Russian domestic politics will determine whether Russia will be able to mitigate the threat of armed conflict through increased integration into international system or would exacerbate the threat of conflict, even against its own interests.

1. See A. Vishnevskiy, *Sberezhenie naroda ili depopulyatsiya Rossii?* (Moscow: 2010), p. 4.

2. For a more detailed discussion of this subject, see Mikhail Tsyarkin, “Russian Politics and American Missile Defense,” *International Affairs* (London), 85: 4 (2009), pp. 773–791.

3. I have heard this opinion time and again in discussions with Russian Sinologists.

4. Vladimir Pastukhov, *Uyti nel’zha vernut’sya*, http://www.polit.ru/country/2011/05/10/comma_print.html, accessed on 10 May 2011.

5. Sergei Filatov, *Proekt “bin Laden” zakryt, Mezhdunarodnaya zhizn’*, 16 May 2011, <http://www.interaffairs.ru/read.php?item=7648>.

4. Future Warfare and China

Nan Li

China has so far exhibited a mix of policy behavior more or less associated with the four different future security scenarios specified in *Tomorrow's Security Challenges*: fragmented international system, concert of powers, return of great power confrontations, and rise of non-state networks. This essay fleshes out the Chinese policy behavior associated with each of these four scenarios, together with a brief discussion of factors/variables that may affect changes in this behavior, which may also indicate which scenario is likely to dominate Chinese policy behavior in the future.

Fragmented international system and Chinese behavior

In comparison with Europe, where regional integration is taking shape, or with Africa, where states are either weak or failing, East Asia is characterized by strong, autonomous states that guide both domestic development and foreign policies, which are further reinforced by strong national identities and inter-state mistrust associated with historical legacies. Chinese policy behavior is both a response to and a perpetuator of such conditions of a fragmented international system where inter-state policy coordination remains difficult. China, for instance, is faced with the issue of reunification with Taiwan and has unresolved land and maritime territorial disputes with many of its neighbors; the central mission of the People's Liberation Army (PLA) since 1985 is to be prepared for fighting and winning "local war" regarding territorial disputes on the margins of China as well as reunification with Taiwan.

Whether these disputes may be resolved peacefully or escalate to military conflicts in the future may be determined by success or failure of Chinese diplomatic and economic integration strategies, preferences and priorities of Chinese leadership, ebb and flow of nationalism, and relative importance of oil.

How the PLA would fight a war if all other policies and strategies fail, however, may depend on the relative balance of battlefield capabilities. If the PLA is the "superior" power in a conflict against an "inferior" opponent, it might deploy strategic-level, exterior-line quick and offensive operations (外线的速决进攻战). If the PLA is the "inferior" power fighting a "superior" opponent, however, it would likely proceed with elevated caution and a shift to interior-line strategic defense (内线战略防御). In this equation, the dominant PLA strategy employed is what is known as "movement warfare" (运动战), that is, quick, tactical-level, exterior-line offensive operations within the general context of interior-line strategic defense.

This active defense strategy highlights constant force movements, including giving up places (or defensive bastions) to avoid the spearheads of enemy offensives; conducting constant outflanking to shift, divide, disperse, and isolate enemy forces and to "cause the enemy to make mistakes;" identifying the weaknesses of enemy offensives in movement; "luring enemy in deep;" developing local and temporary but also absolutely superior forces (绝对优势兵力) relative to each of these weaknesses in movement; and annihilating enemy forces piece by piece in movements (在运动中各个歼灭敌人) beginning with the weakest link. Even in a frontal engagement, which is

to be avoided if at all possible, the primary tactics employed include deep-thrust (穿插), cut-up (分割), outflanking (迂回) and encirclement (包围).

Constant force movement is essential mainly because it generates elasticity that enhances the survival of the PLA against a superior opponent. A bastion defense-type positional war of matching attrition, on the other hand, favors the numerically superior side because similar casualties may mean only marginal loss for this side but possibly total annihilation of the inferior side. Letting the enemy take and defend places or bastions also helps to disperse and isolate enemy forces and gives the initiative to the inferior side that can hold its vital forces (有生力量) together and deploy these forces more freely and decisively. Moreover, force movements gain time to get familiarized with the enemy in order to understand and identify its weaknesses. Achieving local and temporary but absolute force superiority also requires force movement. Finally, concentrating absolutely superior forces to fight the weakest link of the enemy ensures high probability of victory in these battles. As a result, annihilating enemy forces piece by piece in movement, beginning with the weakest link, enables the gradual shift of balance of forces on the battlefield that may eventually allow for strategic-level offensive, exterior-line operations.

This active defense strategy may assign research and development priorities to those weapons systems that are highly elastic (弹性) to the extent of being able to conduct “deep thrust, cut-up, outflanking and encirclement” maneuvers, rather than to those systems that are highly inelastic and escalatory, or more appropriate for a frontal war of matching attrition.

The PLA has also initiated a policy of “informatization” to enhance the effectiveness of its active defense strategy. This policy first intends to integrate information technologies (IT) that can improve the PLA's survivability, including integrating low-observable design into the new naval and air platforms, acquisition of more concealed naval platforms, and enhancing missile defense. China's successful test of a mid-course missile interception on January 11, 2010, test flights of the highly stealthy 4th generation combat aircraft J-20 since January 11, 2011, and acquisition of several new types of submarines are recent examples.

Moreover, this policy aims to integrate IT that can “cause the enemy to make mistakes” by triggering misjudgments. New capabilities may include anti-satellite (ASAT) capabilities, cyber-warfare and other counter-measures that may reduce the effectiveness of the opponent's C4ISR (command, control, communications, computers, intelligence, surveillance and reconnaissance). China's successful ASAT test on January 11, 2007 is a recent example.

Furthermore, this policy intends to integrate IT that can help improve battlefield awareness to identify the opponent's vulnerabilities. The intensified PLA effort in recent years to develop land, coast, sea, air and space-based ISR networks represents this development. Finally, this policy intends to integrate IT that can assist in integrating forces, and that can enhance precision of strikes.

Concert of powers and Chinese behavior

Chinese analysts seem to understand that China's obligations to provide public goods for the global community should grow because China's economic rise is closely related to globalization. China has now become the biggest contributor of United Nations (U.N.) peacekeeping forces among the permanent five members of the U.N. Security Council. It has also continuously deployed naval escort groups to Gulf of Aden to fight piracy since December 2008. China's sponsorship of six-

party talks to denuclearize the Korean Peninsula is arguably China's major non-proliferation initiative. Finally, the PLA Navy's dedicated hospital ship Peace Ark embarked on a three-month voyage of East African and Indian Ocean countries for a humanitarian assistance/disaster relief (HA/DR) mission in 2010.

These Chinese initiatives are driven partly by a desire to enhance China's international prestige and partly by the practical need to create a stable and peaceful environment for continued economic growth at home and for its expanded interests abroad. There are, however, concerns among Chinese analysts that these policies, if excessive, may cause over-extension that may hurt Chinese interests. One major Chinese reflection on Zheng He's maritime voyages in the Ming Dynasty, for instance, is that these voyages squandered resources by building gigantic ships and spreading wealth to enhance imperial prestige but without engaging in profitable trade and acquiring overseas colonies. The tributary system that these voyages helped to develop also contributed to imperial decline because the lesser states scrambled to become tributary states since the Chinese court would give out more expensive gifts than it took in (厚往薄来). These concerns may explain why Chinese policies to do international good can be quite limited and they are mainly confined to protecting Chinese interests. The counter-piracy mission in Gulf of Aden, for instance, serves mainly to protect Chinese flagged ships. The mission of the hospital ship voyage was to provide medical treatment first to Chinese military personnel serving in the South China Sea and Gulf of Aden; second to Chinese diplomatic personnel serving in the East Africa and Indian Ocean countries; and finally to the locals in these countries. Because China suffers from numerous natural disasters every year, the HA/DR missions of the PLA are likely to be primarily concentrated on relieving domestic disasters in the foreseeable future.

Return of great power confrontations and Chinese behavior

The two types of Chinese behavior discussed above may all have implications for return of great power confrontations. The first type, Chinese behavior in the fragmented East Asian international system, does not exhibit the sort of structural and systemic competitions that existed between the US and Soviet Union during the Cold War. The territorial disputes that China has had such as over Taiwan, the Spratly Islands, and Diaoyu/Senkaku pose no direct threat to the security of the US. Neither does China's military doctrine of preparing for fighting and winning a "local war" assume the US as the enemy. The small and limited nuclear arsenal that China has deployed so far may attest to this assumption. China's independent, non-alignment foreign policy also forsakes a major military alliance such as another Warsaw Pact against the US. Furthermore, US and China cooperate on issues of countering international terrorism, energy security, environmental protection, and counter-nuclear proliferation. The level of economic interdependence between the two countries is also quite high.

On the other hand, some countries and regions that China has quarrels with are US allies whom the US has treaty or legal obligations to defend. Also, any assertive Chinese behavior in handling these territorial issues may be perceived as China's attempt to undermine and diminish US power and influence in the region. The mutual suspicion and possible miscalculation about each other's intentions and capabilities within the context of perceived power transition may trigger tension and even small-scale military conflicts. These may further erode the already limited mutual trust and confidence, contributing to precarious conditions that may foster possible great power confrontations.

The second type, Chinese behavior within the framework of a concert of powers, reflects a dilemma that China faces in protecting its expanding overseas interests. Traditionally, China has been dependent on US provision of public goods such as sea lanes security. But a major Chinese concern is that China may pay a high cost for such dependence in a conflict such as over Taiwan, where the US may impose an oil embargo on China. China can try to develop a blue-water navy, but it takes time and it may also trigger great power confrontations that could diminish Chinese security. As a result, China now takes an indirect and non-confrontational approach, mainly in terms of promoting non-traditional security to protect its overseas interests. China is also trying to diversify its sea-borne transportation away from choke points such as Strait of Malacca and to develop land-bound energy and trade-related transportation routes. To reduce over-dependence on exports, expand domestic consumption and achieve more equitable distribution of wealth, the government is also attempting to shift investment capital from the wealthy coastal provinces to more backward hinterland provinces.

There are other major constraints on how far China can go to protect its overseas interests. China, for instance, has no overseas naval bases. A major reason is that China's independent, non-alignment foreign policy forbids China to develop a military alliance relationship with other countries, but overseas military bases are usually located in territories of close allies. This makes it difficult for Chinese naval ships to gain sustained logistics, maintenance and combat support.

Related to this policy is China's approach of "non-interference in internal affairs" (also associated with the pre-modern tributary system) of other countries. While this approach may enable China to avoid entanglement in regional and domestic conflicts of other countries, it also means that China may have minimal influence on domestic development of these countries. This lack of domestic influence may in turn incur heavy economic losses to China in times of domestic chaos and anarchy, as has happened to Chinese investment recently in Libya. Similarly, Chinese military doctrine is about fighting and winning "local war" on the margins of China. This makes it difficult to justify and normalize out-of-region military deployment to protect Chinese overseas interests. Moreover, the PLA Navy is quite weak in its anti-submarine warfare capabilities, which in turn would expose Chinese naval ships deployed overseas to submarine threats.

There are, however, heated debates among China's foreign policy elites on issues such as establishing overseas military bases, maintaining the non-alignment and non-interference foreign policies, and developing the "local war" doctrine. Such debates have resulted in some subtle changes to Chinese policy behavior. China, for instance, has recently begun to cultivate relations with political oppositions in countries such as Libya and Sudan, which represents an important departure from its policy of non-interference in other countries' internal affairs. The outcome of these debates is crucially important because they may constitute major indicators on whether China intends to become a global superpower, which may have major implications for great power competitions if not direct confrontations.

Rise of non-state networks and Chinese behavior

Numerous small-scale protests/riots every year and ethnic unrests in Tibet and Xinjiang constitute major domestic challenges to the Chinese Communist Party (CCP) rule in China. The causes of these incidents are complex, ranging from unfair compensation, and poor working conditions, to environmental and safety-related issues, abuses of power by local officials such as land grabs,

regional and ethnic discrimination, and the spread of the internet and proliferation of sensational media.

In a country of 1.3 billion people experiencing rapid economic and social changes, occurrence of these so-called “mass incidents” may not be totally abnormal. A major indicator of whether these incidents may represent the rise of politically motivated non-state networks is whether they evolve into nationally organized oppositions that directly challenge the party rule. Another major indicator of whether governance collapses in China and whether major civil conflicts prevail due to the rise of these networks is whether the PLA is mobilized to defend the party against these domestic political oppositions.

On both counts, however, trends seem to favor the government rather than the non-state networks. For instance, these protests have so far stayed relatively localized, disconnected to each other, and confined to economic and other practical grievances and demands rather than political ones. Also, instead of being mobilized to protect the party against domestic political oppositions, the PLA has been largely confined to its functional, technical and external missions for more than 20 years since 1989. Lessons learned from the 1989 Tian’anmen incident and the collapse of communism in the former Soviet Union and Eastern Europe from 1989 to 1991 by China’s governing elites may account for these trends.

One major lesson learned from the events during 1989-1991 is that the CCP’s dependence on military force in Tian’anmen for survival indicates the failure of the party-state to resolve major social-economic crises and implies its lack of ability to manage social protests other than through the use of such lethal means as tanks and sub-machine guns. This had contributed to a decline in the CCP’s legitimacy to rule. Also, there are indicators that the PLA was reluctant to get involved in the suppression of the rebellion mainly because its image would be damaged. Even for Deng Xiaoping, the task of persuading the PLA to intervene had been far from easy, and he had to exhaust much of his political capital to accomplish this.

More recent leaders such as Jiang Zemin do not possess the kind of revolutionary and military credentials that Deng did. So new leaders are not confident that the military would take their side if ordered to intervene in another crisis on the scale of Tian’anmen. The popular revolts that ended communist rule in the former Soviet Union and Eastern Europe show that rather than taking the party’s side, the military mostly defied its orders. This means the party’s reliance on military force for its survival may not necessarily guarantee success, but may quicken the demise of the party rule instead.

These concerns may explain why Jiang replaced the post-1989 policy of military control and ideological indoctrination with a new policy of promoting economic growth at the 14th CCP Congress of 1992, a policy also associated with Deng’s southern tour in early 1992. Such a policy was intended to enhance the CCP’s legitimacy to rule by increasing income and improving living standards, and providing employment opportunities for millions of people who join the labor force every year. It also helped to generate revenue for preventing and preempting social crises. By 2011, for instance, China’s public (domestic) security outlays of \$95.0 billion overtook its official defense budget of \$91.5 billion for the first time.

Strategies have been developed to manage social protests stemming from the downsides of rapid economic growth, such as massive urban unemployment due to reform of state-owned enterprises, over-taxation of the peasants, rampant corruption, wealth polarization and environmental degradation. They range from soft approaches such as co-opting protesters by meeting their

demands and improving institutions for monitoring, expressing and resolving grievances before they escalate, to hard ones such as arresting politically conscious organizers, and isolating and containing such protests to prevent them from evolving into larger, better organized movements that directly challenge the CCP's rule.

Similarly, the People's Armed Police, which is primarily responsible for maintaining domestic social stability, has been substantially strengthened, and riot control units with non-lethal means such as tear gas and rubber bullets were developed and deployed. All these have reduced the need to mobilize the PLA against domestic political oppositions. They in turn made it possible to confine the PLA to the narrower functional, technical and external missions.

5. Geopolitical Trends and Security Challenges across the Indian Ocean and Asia-Pacific Regions

G. Parthasarathy

India's foreign policy in the contemporary world will be guided by a number of diverse considerations. Now described as an "emerging power," the predominant focus of attention in India will remain on fashioning an environment, both external and internal, which will help the country to proceed on a path of around double digit economic growth, with economic growth being as inclusive as possible. In a diverse and pluralistic country like India, the very process of economic growth will inevitably generate social, ethnic, linguistic and sectarian tensions. While corruption and criminalization of politics are presently straining its body politic, adversely affecting economic growth and evoking public criticism, there is, nevertheless, confidence that India has the strength and resilience to overcome these challenges. Terrorism sponsored by radical, Wahhabi oriented Islamist groups, is going to remain a formidable diplomatic and security challenge. The American "War on Terror" has dispersed, but not destroyed the terrorist threat emerging from India's western neighbourhood. Moreover, with its demand for energy resources rising rapidly, India will have to focus increasing attention on the Persian Gulf, where over two thirds of the world's resources of oil and gas are located and regional rivalries and sectarian tensions have been exacerbated following the American invasion of Iraq.

The National Intelligence Council Report *Global Trends 2020* observed that Asia, with a relatively young population and work force, expanding educational facilities and the benefits of globalization, and 60% of the world's population, will become the manufacturing hub of the world in coming years. China and India will alone provide 1.1 billion of the labour force of 1.7 billion in the Asia-Pacific Region. In the next half century, as the developed world and especially Europe ages, a younger and better educated work force in Asia will become the driving force for global manufacturing and growth. The balance of power will shift—particularly from Europe to Asia. Given this scenario, India is developing a comprehensive policy of promoting widespread engagement not only with the fast growing Asia-Pacific Region to its East, but also with the oil rich Persian Gulf Region to its west, from where it imports 70% of its oil and where an estimated 5.8 million Indian nationals now live and work, accounting for the bulk of the \$50 billion total that Indians overseas remit to India every year.

India has made sustained efforts for economic integration, not only in South Asia and within SAARC (South Asian Association for Regional Cooperation), but also with the rapidly growing economies of East and Southeast Asia. Over the past two decades, India's "Look East" policies have enhanced its diplomatic profile in its eastern neighbourhood. As a full "Dialogue Partner of ASEAN" (Association of Southeast Asian Nations) and as a member of the ASEAN Regional Forum (ARF), India has concluded a Free Trade Agreement (FTA) with the ASEAN grouping, after concluding bilateral FTAs with two ASEAN members, Thailand and Singapore. It is now a participant in the annual East Asia Summit, which currently includes the leaders of China, Japan, South Korea, Australia and New Zealand (with the US and Russia scheduled to join), apart from the Heads of ASEAN Governments. India's trade and investment ties with the countries of East and Southeast Asia are rapidly expanding. Comprehensive Economic Cooperation Agreements with Japan and South Korea have been inked. Within South Asia, the South Asian Free Trade Agreement (SAFTA), though limited to trade in goods, is regarded as the first step towards establishing free

trade in investments and services, with the goal of progressively moving towards establishing a customs union and an economic union in South Asia. Supplementing efforts at economic integration within SAARC are moves for economic cooperation in the Bay of Bengal. The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), an economic grouping comprising Nepal, Bhutan, Bangladesh, India, Sri Lanka, Myanmar and Thailand, acts as a bridge between South and Southeast Asia.

In this emerging scenario, where a common quest for prosperity and rapid economic growth is driving a process of increased Asian economic integration, how will the US and China, which are set to be the two major competing centres of global power, view other players in coming years? A US journalist described the US-China relationship as one “between a still dominant, but fading superpower, facing a new and ambitious rival, with suspicion on both sides.” China’s economy continues to boom, recording a growth of 10.3% in 2010. China has spent over \$ 100 billion in aid to developing countries during the past few years—exceeding the aid given by the World Bank. Chinese aid is ostensibly without strings, but is focused on acquiring access to natural resources in recipient countries. The United States, on the other hand, is presently mired in an economic crisis with high unemployment and with a budget deficit estimated at 10.64% of GDP.

While there has been a marked improvement in the climate of Sino-Indian relations in recent years, the relationship between India and China is still clouded by mistrust. While China views improved US-Indian relations with suspicion, India retains memories of close Sino-US cooperation detrimental to its interests, during the Nixon and Clinton Administrations. There is concern in India about what is perceived as China’s policy of “containment” of India, marked by growing Chinese interest in maritime facilities in countries like Myanmar, Sri Lanka, Maldives and Pakistan. China’s supply of weapons to the beleaguered regime of King Gyanendra of Nepal at a time when the international community was nurturing a process of democratic change in the country, as well as its continuing cooperation with Pakistan in nuclear and missile development, have only accentuated Indian misgivings. China’s growing “assertiveness” in its territorial claims on the Indian border State of Arunachal Pradesh, its efforts to undermine India’s efforts for regional influence by opposing India’s participation in forums like the East Asia Summit and the summit-level Asia Europe Meetings (ASEM), its ambivalence on India’s candidature for permanent membership of the UN Security Council and its attempts within the Nuclear Suppliers Group (NSG) to maintain global nuclear sanctions on India, indicate that dealing with China is going to be a major challenge for India in coming years.

Despite these differences and challenges, bilateral trade and economic relations between Beijing and New Delhi are booming and the two countries have embarked on a series of measures to enhance mutual confidence. Moreover, on multilateral issues, such as global warming and the Doha Round of the WTO, common and shared interests and perceptions have led the two governments to cooperate with each other. The Indian response to Chinese policies of “containment” and “strategic encirclement” has been largely defensive. But, as India’s economic and military potential grow and the country’s “soft power” expands, India is dealing with Chinese policies by adopting more proactive measures in its relations with countries like Japan, South Korea and Vietnam; by developing a larger footprint in its relations with ASEAN; and a more imaginative economic engagement with Taiwan. At the same time, there are significant constituencies for peace and cooperation in both India and China. There are efforts collectively by India, Russia and China to cooperate in the evolution of a stable, multipolar world order, in forums like BRICS (Brazil, Russia, India, China, South Africa) and the G20. Conscious efforts are being made to keep tensions from escalating—particularly along the Sino-Indian border—and to widen engagement between India and China

bilaterally, regionally and globally. Common sense dictates that there is enough strategic space across Asia for India and China to cooperate and develop to their full potential.

In 1991, Deng Xiaoping advocated to his countrymen a strategy of “hide your strength, bide your time,” to enable China to develop rapidly, without being held back by global and regional tensions and rivalries. As its economic power and military strength have grown, China is widely perceived in recent years as flexing its military muscle, evoking concerns in its hitherto sanguine neighbours. China has, over the past few years, been more assertive in relations with countries across its Asia-Pacific neighbourhood, ranging from Japan and Vietnam to Indonesia and India, particularly on issues pertaining to maritime and land borders. Another issue arises from reports of China’s plans to dam the Brahmaputra River, provoking substantial concern in India and Bangladesh. There are concerns that what are presently run of the river projects, could well be the first step towards future diversion of river waters. China is not a signatory to the 1997 UN Convention on Transnational Rivers and the experiences of downstream countries along the Mekong Basin evoke concerns in India and Bangladesh. India has formal inter-State agreements on sharing river waters with Bangladesh and Pakistan, which have worked well, despite new problems arising from the melting of Himalayan glaciers because of climate change.

China recently declared that like Tibet and Taiwan, the entire South China Sea is an area of “core interest.” Territorial claims in the South China Sea have been enforced using maritime power. The visiting Commander of the American Pacific Fleet Admiral Timothy Keating was told by his Chinese counterparts in May 2009 that the United States should recognize the western Pacific and the Indian Ocean as China’s sphere of influence. China opposed Joint US-South Korean military exercises in the Yellow Sea, after North Korea torpedoed and sank a South Korean naval vessel. China has also been increasingly assertive with Japan in disputes in the East China Sea over the Senkaku Island and on differences over drilling rights in contested areas. The export of crucial rare earth materials to Japan was suspended in the wake of tensions over maritime boundaries. Consultations have now been held between India and Japan on measures to end dependence on China in such strategic areas. The crucial concern is whether China will become militarily more assertive and nationalistic as its economic and military power grows, or whether it will abide by the policies advocated by Deng Xiaoping.

There are concerns cross Asia that as Chinese economic and military power grow, the United States will become more circumspect and accommodating in dealing with China. The Chinese will, in turn, appear to respond positively to American concerns on issues like nuclear proliferation in Iran and North Korea. The Russians seem to be prepared to take advantage of this situation by extending selective support to the US on issues like their logistical needs in Afghanistan. Japan has already adopted a more China-specific defence posture. Japan’s New Defence Guidelines Programme of 2010 explicitly states that China’s “military modernization and its insufficiency of transparency” are a “major concern.” Naval exercises involving India, Japan and the US were held near Okinawa last year and India is expanding security cooperation with Asia-Pacific countries like Japan, South Korea and Vietnam. India’s partnership with Russia remains strong and multi-faceted.

While the US-Russian relationship has strengthened recently, a stable balance of power across Asia cannot emerge until there is a clear understanding and accommodation between the US and Russia on the vital issues of NATO expansion and on what legitimate Russian interests are in the former Soviet Republics. Even if there are rivalries over access to energy resources, both the US and Russia share a common interest in resisting religious extremism in Central Asia and across the Caucasus region. It is crucial that differences between the US and Russia do not affect the invaluable role that

US-Russian cooperation can play in dealing with problems of extremism and terrorism emanating from Afghanistan and its neighbourhood. As the Global Trends 2025 report observes, Pakistan faces strains to its polity, arising from the conflict in Afghanistan. The northern supply route through Russia and Central Asia is crucial for a joint US-Russian effort to stabilize Afghanistan and its neighbourhood.

China will continue its military, nuclear, economic, and diplomatic cooperation with Pakistan and enhance its economic and military profile across the strategic sea lanes of the Indian Ocean. This will have to be dealt with by imaginative economic, diplomatic and military responses and a process of intense engagement with China. Efforts to build structures for cooperation in the Indian Ocean region can be initiated by building an inclusive and effective architecture for cooperation to deal with problems like piracy and natural disasters. It would be incorrect to exaggerate the possibilities of conflict between India and China. India will, however, complement its economic growth with modernization of its armed forces, improvement of communications along its borders with China and development of its nuclear and missile capabilities. India's interaction with ASEAN members and especially with Vietnam, Singapore, and Indonesia is regarded as essential in promoting this effort. The United States will maintain a naval presence in India's eastern neighbourhood and India and the US are cooperating in building an inclusive architecture for cooperation in East and Southeast Asia. India's interaction with the US and Japan is also set to increase in the quest for building a stable balance of power across the Asia-Pacific and Indian Ocean regions.

As Asia emerges as the hub of international economic growth in the twenty first century, it is the longer term Indian aim to see that tensions in the region are subsumed as far as possible, through greater economic integration in a common quest for prosperity, as Europe experienced in the 20th century. Moreover, there is a measure of confidence that while a rising China will continue to pose a strategic challenge, a conflict with China can be avoided not only through bilateral cooperation and confidence-building measures (CBM), but also by ensuring a measure of adequacy in India's defence potential. Two mountain divisions are being raised and frontline fighter aircraft deployed on India's borders with China. A substantive development of naval potential is underway, to ensure that the Indian navy has two operational aircraft carriers, two nuclear submarines and Scorpene-class submarines by the end of this decade. India is also acquiring maritime and airlift capabilities, which will enable it to respond appropriately to challenges across its Indian Ocean neighbourhood.

While there is a measure of optimism about India's eastern neighbourhood, the country's Indian Ocean neighbourhood, extending from the Afpak region, across the Persian Gulf to the Straits of Hormuz and the shores of Somalia, remain volatile. Relations with Pakistan improved substantially, with broad agreement reached even on the framework of a settlement to the issue of Jammu and Kashmir, during the period 2003-2007, when General Pervez Musharraf was Pakistan's President. This followed an assurance that General Musharraf would not allow "territory under Pakistan's control" to be used for terrorism against India. Relations experienced a setback following the terrorist attack on Mumbai in November 2008, which was carried out by members of *Lashkar e Taiba*, an organization based in Pakistan. While dialogue between the two countries has resumed, concerns remain that tensions could escalate, should there be another major terrorist attack on Indian soil emanating from "territory under Pakistan's control." In the meantime, the effort will be to see if it is possible to build on the progress achieved before 2007.

While Pakistan has not formally enunciated a nuclear doctrine, Lt. General Khalid Kidwai, the Head of the Strategic Planning Division for its National Command Authority told a team of physicists from Italy's Landau Network in 2002 that Pakistan's nuclear weapons were "aimed solely at India."

According to the report of the Landau team, Kidwai added that Pakistan would use nuclear weapons if India conquers a large part of Pakistan's territory, or destroys a large part of Pakistan's land and air forces. Kidwai also held out the possibility of using nuclear weapons if India tries to "economically strangle" Pakistan or pushes it to political destabilization. Most Indian observers acknowledge that while there was a tendency within political and diplomatic quarters in Pakistan to wrongly assume that India would be deterred from conventional cross border responses if it was made out that Pakistan's nuclear threshold was low, General Kidwai's elucidation, which came in the wake of serious tensions along the borders, was a realistic signal of the military's views on the thresholds of Pakistan's nuclear weapons strategy. They set the stage for preventing misunderstandings about nuclear thresholds leading to nuclear escalation. It should, however, be evident that in the event of another terrorist attack like that on Mumbai on November 26, 2008, the Indian response is likely to be measured, proportionate, carefully calibrated and internationally justifiable.

India's nuclear doctrine, first officially enunciated on January 4, 2003, asserts that it intends to build and maintain a "credible, minimum deterrent." This deterrent is to be based on a "triad" of "aircraft, mobile land-based missiles, and sea based assets." While adopting a policy of "no first use," the doctrine clarifies that its nuclear weapons will only be used in retaliation against a major attack on Indian territory or against a nuclear attack on Indian forces anywhere. India also retains the right to use nuclear weapons in the event of major attacks on Indian territory, or on Indian forces anywhere, that use chemical or biological weapons. While concern has been voiced about strained relations between India and Pakistan leading to a nuclear conflict, India and Pakistan acknowledged on June 6, 2004, that "the nuclear capabilities of each other, which are based on their national security imperatives, constitute a factor for stability." Apart from a degree of mutual confidence which now exists because of a better understanding of each other's nuclear thresholds, India and Pakistan have cooperated in working out a series of nuclear CBMs. They have signed agreements on "Reducing the Risk from Accidents Relating to Nuclear Weapons" and "Pre-Notification of Flight Testing of Ballistic Missiles." India's nuclear arsenal and delivery systems are not "Pakistan specific," but geared to also deal with the existence of substantial Chinese nuclear weapons and delivery capabilities. Interestingly, in recent months, there has been the commencement of a Track 2 dialogue between India, Pakistan and China, on enhancing nuclear confidence across their borders.

The US intervention in Afghanistan was ill conceived and failed in military terms from the very outset. Actual fighting in the north and the takeover of Kabul was virtually outsourced to the Northern Alliance. More inexplicably, no attempt was made to block the exit route of the Taliban and Al Qaeda leadership to safe havens in Pakistan, across the Durand Line. This has rejuvenated the Taliban and its allies, including the Al Qaeda, inflicting a heavy toll on American lives. With the Pakistan army unwilling and unable to crack down on groups long regarded as "assets," the US and its NATO allies are stuck in an apparent quagmire, even though the hope has been expressed that Afghan forces will take on counter insurgency responsibilities by the end of 2014. The stalemate in Afghanistan is unlikely to end at an early date. It is unlikely that the Taliban will accept a solution that requires it to eventually lay down arms and accept the present Afghan Constitution. It is equally unlikely that the Taliban will forsake its allies in Al Qaeda and Al Qaeda linked groups like the Islamic Movement of Uzbekistan, the North Caucasus Emirate, *Lashkar e Taiba*, *Harkat ul Jihad ul Islami*, or *Jaish e Mohammed*. And ethnic Tajiks, Hazaras, and Uzbeks, together with a section of Pashtuns in Afghanistan, will resist any attempt at a Taliban takeover. It is unlikely that peace and stability will return to Afghanistan, in the course of this decade—a development that will have profound implications for peace and stability not just in Pakistan, but regionally and globally.

India's Persian Gulf neighbourhood contains two thirds of the world's proven petroleum reserves and 35% of the world's gas reserves. Moreover, as energy demands increase worldwide, it is these countries, which maintain 90% of the world's excess production capacity, which alone can meet the growing demand of rapidly emerging economies like China and India and help tide over breakdowns in supplies elsewhere. India's major suppliers of oil from the Gulf are Saudi Arabia, Iran, Iraq, Kuwait, and the United Arab Emirates. An estimated 5.8 million Indians reside and work in member states of the Gulf Cooperation Council (GCC). Indians living in these six Arab States are responsible for the bulk of the \$50 billion that Indians working abroad remit annually. These six countries meet around two-thirds of India's oil needs. Iran provides 17% of India's oil imports, with some key refineries dependent on Iranian crude. Moreover, Iran remains India's transit point for trade with Central Asia, Afghanistan, and—through the Caspian—Russia. Iran and India share a common aversion to the return of Taliban style extremism to Afghanistan, but India joined the US and others on issues pertaining to Iran's nuclear programme. The assessment in the Global Trends 2025 report expressing doubt that Iran will inevitably go nuclear is broadly shared in India. But, in dealing with Iran, it would be a folly to underestimate the sentiments of of Persian civilizational pride that transcend internal political differences.

The Persian Gulf remains a crucible for ancient rivalries, civilizational (Arab vs. Persian) and sectarian (Shia vs. Sunni). The depth of these animosities was exposed when, alluding to King Abdullah, Wikileaks revealed the "King's frequent exhortations to the US to attack Iran and put an end to its nuclear weapons programme." Riyadh even reportedly offered over-flight facilities to Israeli warplanes, in the event of an Israeli attack on Iran's nuclear facilities. Israel has astutely played on Arab-Persian rivalries to ensure it remains the sole nuclear power in the Middle East. Moreover, despite all talk of their solidarity with the Palestinians, a number of Arab countries maintain covert and not so covert ties with Mossad.

The sectarian dimensions of rivalries in the Persian Gulf cannot be ignored. Iran has consistently stirred up Shia minorities in Yemen and Kuwait and the Shia majority in Sunni-ruled Bahrain. This rivalry is also being played out in Iraq, where the Shia majority has accused its Sunni Arab neighbours of backing extremist Sunni groups. Paradoxically, after endeavouring to follow a policy of "dual containment" of both Iran and Iraq for over a decade, the US is now finding that its ill advised invasion of Iraq has only brought the two countries closer together, with a number of Iraqi political and religious figures beholden to Tehran for the support they have received. As Charles Freeman, former US Ambassador to Saudi Arabia, recently observed: "These changes (in the Arab world) are occurring as the US withdraws from Iraq, leaving behind a ruined country under heavy Iranian influence. Iraq is incapable, at least for now, of resuming its historic role as part of an Arab coalition to check Persian aspirations and hegemony in West Asia." While Arab regimes may be dependent on American support, the mood in Arab streets is distinctly anti-American—a development that will inevitably affect the course of developments in the Middle East and shape the contours of global terrorism.

India's relations with Arab Gulf States have shown a distinct improvement after the visits of Saudi Arabia's King Abdullah in January 2006 and Dr. Manmohan Singh to Riyadh in February-March 2010. India has received Saudi assurances of meeting of its growing requirements for oil. The desert kingdom and home of Islam's holiest shrines appears to recognize the need to reach out to countries like India and China, even as it maintains its strong security ties with the US. Moreover, relations with Oman, the UAE and Qatar have expanded significantly, with Qatar emerging as an important supplier of liquified natural gas (LNG). While India enjoyed a good relationship with secular Baathist-ruled Iraq, it is the Indian view that the invasion of Iraq was a serious mistake. It has ignited

Shia-Sunni rivalries across the oil rich Persian Gulf and led to the emergence of strong links between erstwhile foes Iran and Iraq. The entire balance of power in the Persian Gulf has been destabilized. The greatest threats to global stability are likely to emerge even beyond the present decade will emerge from rivalries, instability, violence and terrorism in the Greater Middle East. It is imperative for outside powers to devise common strategies and collective measures to maintain peace and stability in this region.

The Global Trends 2025 Report realistically acknowledges that the US will be one of a number of actors on the world stage, albeit the most powerful one. It notes that multipolar systems have been more unstable than bipolar or even unipolar ones. While noting that emerging powers and many Europeans dispute the right of any one power to be a global hegemon, the report observes this could well lead to less cohesiveness. But it is obvious that the new order that emerged with the end of the Cold War based on global economic dominance by the Atlantic alliance is no longer sustainable. But despite aging populations and the current economic downturn, Europe will remain an important player in the development of cutting edge technologies and economic assistance to developing countries. China and India are returning to the position they held two centuries ago, when they together they produced 45% of the world's wealth. They are, for the first time since the 18th Century, set to be the largest contributors to worldwide economic growth. These two countries are likely to surpass the GDP of all other countries except the US and perhaps Japan by 2025.

What now appears to be transpiring is the emergence of a “Multipolar World Order”, where the emerging powers have relatively large populations, with their governments increasingly recognizing the importance of economic growth and technological advancement as being key to power and influence. Wars between emerging powers or with existing economically advanced nations would undermine their economic power, erode their global standing, and remain unwinnable. Such wars appear unlikely, in an era of increasing economic interdependence. But, rivalries in the quest for influence and primacy in different regions of the world and for preferred access to natural resources would remain inevitable. It is evident that given its innovative and technological capabilities, its technological edge in military capabilities, its vibrant democracy and its openness to immigration, the United States is and is likely to remain, the dominant player in world affairs for the foreseeable future. But, mired in an economic morass and with rates of economic growth averaging 2-3%, the United States cannot exercise influence exclusively. The concerns in the Global Trends 2025 Report about a “Fragmented International System,” however, appear misplaced, despite inevitable rivalries for influence and access to natural resources. Unlike during the Cold war and in earlier eras, the rivalry for natural resources and political influence has necessarily to be moderated by the imperatives of global economic interdependence.

As mentioned earlier, the region stretching from South Asia to East and Southeast Asia is going through a historically unprecedented process of economic integration. Rivalries and tensions over territorial disputes, access to river water and other resources will, however, remain, along with concerns about the future directions of China's policies. The US has a crucial role to play in remaining engaged with this region, in participating in an inclusive architecture for cooperation and security and for securing a viable Asian balance of power. The recently expanded East Asia Summit which brings together the members of ASEAN with Japan, South Korea, China, Australia, New Zealand, India, Russia, and the US, provides an inclusive and viable framework for seeking these objectives. These developments are taking place at a time when emerging powers are building groupings like BRICS and the Shanghai Cooperation Organization, where they can ensure that their interests on issues like energy, global warming, world trade and international finance are protected. Emerging countries will also seek to evolve a common approach to respond to efforts for “regime

change” through the use of military force, under the rubric of “Responsibility to Protect.” The emergence of the G20 as a forum to discuss global economic issues also reflects these changes in global power equations.

The *Tomorrow's Security Challenges* report alludes to the rise of non-state networks and possibilities of a return of Great Power confrontations. Given the volatility of the political situation across the greater Middle East, it is evident that the problems posed by local, regional and global terrorist networks will continue. As global communications and interconnectivity expand, networking between terrorist organizations will inevitably expand, posing a greater threat to global stability. The US and more significantly its European allies will remain vulnerable to such threats, given the growing population of immigrants and expatriate populations who bring local grievances and prejudices from their home countries. Manifestations of what some describe as “Islamophobia” in countries like France may, however, only increase the potential for terrorist violence across Europe.

Despite its military/technological edge, the United States will find it costly and difficult to respond to perceived threats through conventional military intervention, as it has done in the past decade in Iraq and Afghanistan. The wars in Iraq and Afghanistan cost the American taxpayer an estimated total of \$1.1 trillion through July 2010. The Iraq invasion led to an estimated 655,000 Iraqis killed and 4.2 million displaced from their homes. It has only resulted in greater instability across the greater Middle East, with sectarian rivalries being accentuated and the entire balance of power destabilised. While the military intervention in Afghanistan was inevitable and internationally justifiable after the terrorist strikes of 9/11, the wisdom and necessity of military action in Iraq is questionable. Both these conflicts have established that counterinsurgency on foreign soil is expensive and often unwinnable. The AK-47, IED, and suicide bomber are great “equalizers.” They can render counter-insurgency operations in distant lands costly and unsustainable.

In these circumstances, it is important that, while avoiding massive commitments of ground forces, powers like the US deploy their military potential and particularly ground forces rarely, using them selectively and primarily as a deterrent. Ill advised and ill planned use of military power, which cannot achieve strategic objectives in a matter of days, only reduces credibility and invites challenges. Moreover, use of force has to invariably enjoy international sanction and legitimacy. As global economic interdependence grows, ways will be found for major powers not to allow competition to lead to confrontation. The global situation is such that no major power can prevail militarily over real or perceived rivals, without having to pay unacceptably high costs, nationally. The challenge lies in devising frameworks of consultation and cooperation, to avoid competition spiralling into confrontation.

6. Ideas and Norms in Future War and Warfare

Jan Angstrom

Introduction

Predicting future war and warfare is as daunting a task as the issue of forecasting world politics. Paul Hirst (2002: 90) argued that: “Predicting the future of war is a risky business. The key thing to avoid is over generalisation from current events.” Hans Morgenthau (1985: 23) even claimed that: “The first lesson the student of international politics must learn and never forget is that the complexities of international affairs make simple solutions and trustworthy prophecies impossible. Here the scholar and the charlatan part company.” Another well known and respected American social scientist, Robert Jervis (1992), once stressed that the basic problem for us is that phenomena such as wars tend to be multi-causal and, since predictions usually rely on extrapolating from one variable, predictions are inherently difficult in world politics. A second problem for forecasting is that humans may actually learn things. If they do, they can, of course, avoid repeating past mistakes; but, as they do so, they inadvertently make predictions even trickier. John Lewis Gaddis (2004: 11) has argued that the true worth of history is “to *prepare* you for the future by expanding experience, so that you can increase your skills, your stamina—and, if all goes well, your wisdom.”

In general, it is fruitful to distinguish between different approaches to the study of the future and the role of the future for current policy processes. The first approach develops scenarios for the future. It can be said to premier current policy considerations over necessarily predicting the future as such. Typically, government long-term planning focuses on this approach, since it provides clear-cut alternatives that the state needs to factor in and, in worst-case scenarios, try to avoid or manage. This approach can often be criticised for overstating the importance of present policy concerns in predicting the future. Moreover, scenarios are quite often detached from the current situation, thus creating the impression of lack of agency. The second approach attempts to predict the future as correctly as possible, and these predictions then serve as a basis for current policy options. Within this approach, current trends are usually thought to have an important role insofar as they serve as the baseline from which to extrapolate the future. Often, structural features such as conflict patterns, demography, and long-term economic trends are used within this approach. It, too, can be criticised for understating the importance of agency in shaping the future. Still, by being grounded in systematic data, it provides a compelling case for telling us something about the future.

In this paper, I will develop a slightly different approach that instead assumes that the future is path-dependent. This approach allows for a greater impact of agency and can be easily summed up as what happens in 2030 depends upon what we do in 2029, and what happens in 2029 depends upon what we do in 2028, and so on. Agency thus becomes crucial for shaping the future. Moreover, rather than focusing on actions, in this paper, I will primarily focus on norms. Norms change only gradually and slowly and are therefore a more promising baseline than current actions. Specifically, I will focus on norms of political order: about what it means to govern and be governed, how we understand the relationship between the public and private, and the concepts of civil and military.

This paper is structured as follows. First, I will briefly discuss current patterns in war and warfare to evaluate whether or not there are trends that can be discerned. This part of the paper is based on the second approach and it serves a springboard to begin to think differently about the future. Throughout the paper, I will use the trends as a point of departure. Second, I will begin with a

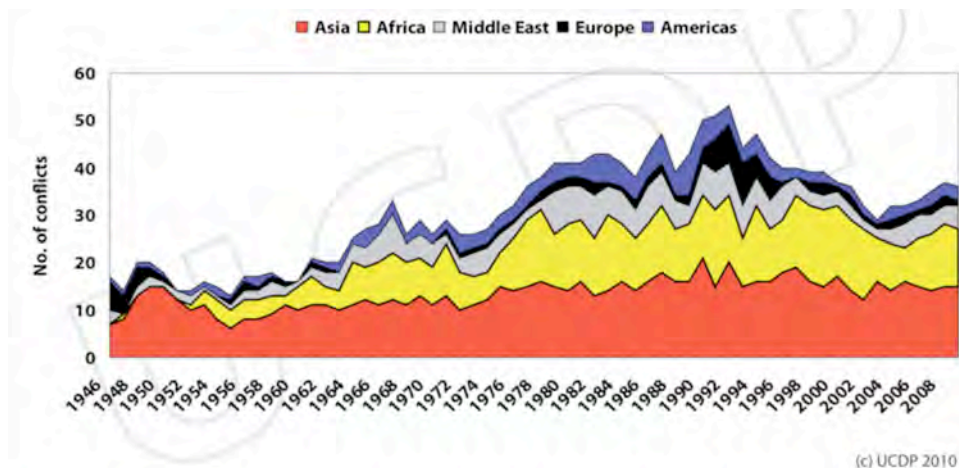
discussion on what we already know about the future. In doing so, I will critically engage with the NIC documents *Global Trends 2025: A Transformed World* and *Tomorrow's Security Challenges: The Defence Implications of Emerging Global Trends*. In short, my critique will stress the lack of attention given to ideational factors. Third, and finally, I will suggest ideationally driven scenarios and identify the challenges to such a development of war and warfare.

What we know of the recent past

There are a number of different data sets on armed conflict. To possibly identify some current trends, I consulted Uppsala Conflict Data Programme (UCDP). This source has recorded ongoing violent conflicts since the 1970s and tracks conflicts back to the Second World War. Its definition of armed conflict is becoming a standard in how conflicts are systematically defined and studied. Its data is used in research published worldwide and in many top journals. Every year its updated data is published in *Journal of Peace Research*, as well as in a separate research report identifying trends in armed conflicts.

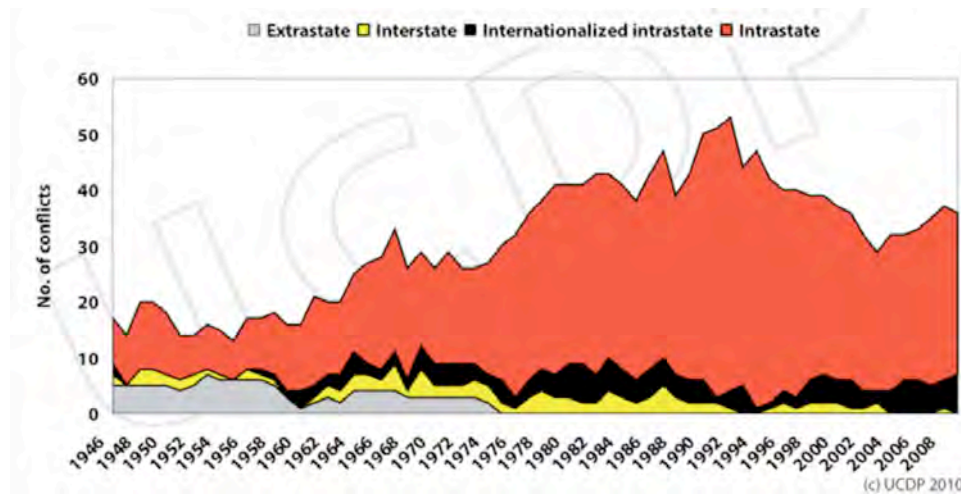
There are a number of visible trends in the data that most likely is interesting for ten to 20 years into the future. First, the number of conflicts nearly doubled in the late 1970s and early 1980s. This number peaked in the immediate aftermath of the Cold War, but then slowly receded down to a 1980s level where it seemingly has stabilized. Second, it is, in particular, armed conflicts in the developing world—in Africa and Asia, specifically—that can account for the rise of armed conflict in the 1970s and 1980s (figure 1).

Figure 1. Armed Conflicts by Region, 1946–2009



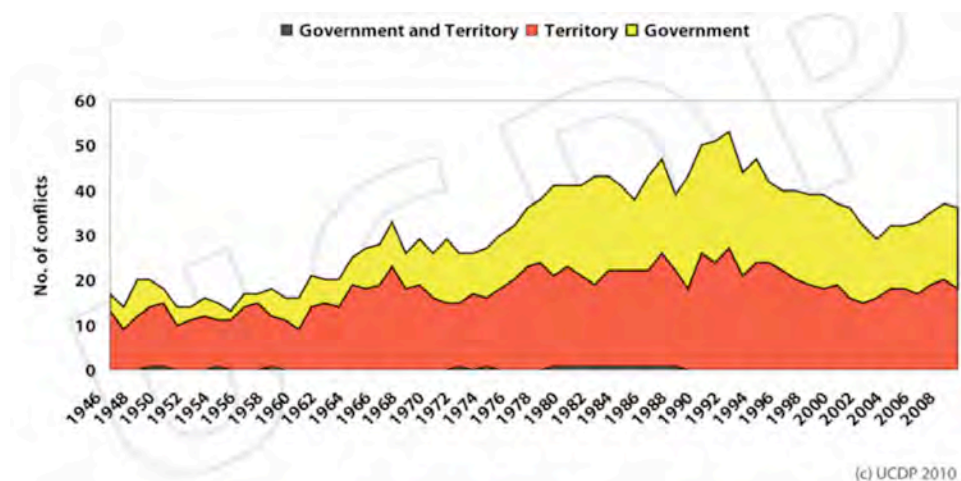
Third, it is clear that intrastate armed conflicts have been a major problem since the early 1960s, and this trend is reinforced throughout the following decades. The one category that starts to challenge this picture is internationalized armed conflicts, but they are still just a minor part of the total number of armed conflicts. We can also see that traditional interstate armed conflict is something that has been remarkably uncommon during the whole era (figure 2).

Figure 2. Armed Conflicts by Type, 1946–2009



Fourth, contrary to popular wisdom that holds that ethnicity-based and secessionist wars have been the major problem for international security since the Cold War, it is primarily conflicts regarding governance that have increased since the 1970s, while the number of ethnicity-based and secessionist armed conflicts have remained more or less stable since the mid-1960s (figure 3).

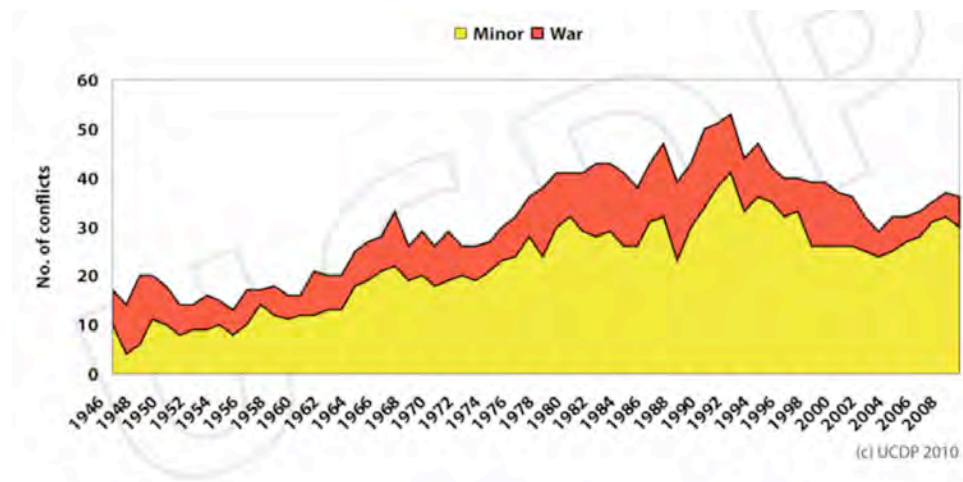
Figure 3. Armed Conflicts by Incompatibility, 1946–2009



Finally, the data confirm the well-known tendency that armed conflicts do not escalate very often into wars, large-scale organised violence. The number of on-going wars throughout this period has roughly been 5-10 per year. The increase from the 1970s and onwards in armed conflicts instead can be attributed to an increase in minor armed conflicts (figure 4). Armed conflict is defined by UCDP

as “... a contested incompatibility which concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths.” War is defined as involving “At least 1,000 battle-related deaths in one calendar year.”

Figure 4. Armed Conflicts by Intensity, 1946–2009



Following from this, one could argue that typical armed conflicts in the future will be of fairly low intensity, occur in the developing world, mainly be intrastate, and are most likely to be about the governance of a state. One of the problems, however, with trying to project these trends, even into the near future of coming decades, is that we need to figure out how to explain these trends. If we cannot, then we cannot be sure that we are projecting the right trends. It is also difficult for data-collection forecasts to account for sudden disruptions and discontinuities. This challenge is appropriately recognised in *Global Trends 2025*. The end of the Cold War and its consequences are cases in point. To try to figure out the future, it may be necessary to use a different approach.

What we already know about the future

My starting point for this discussion is that predicting the future may not be a problem. It is my contention that we know the medium-term future of war and warfare pretty well already. *We know it already*. This may sound rather alarming at first, but two important conditions underpin this claim.

First, if you believe in the importance of ideational factors, i.e., if you are in any shape or form a little bit constructivist, you will recognise that we cannot fight wars and conduct strategy or operations in a way we have not thought about beforehand. A number of scholars have recognised the impact of culture and mental frameworks on the conduct of operations (e.g. Farrell 2005; van Creveld 2009). Hence, a precondition for action is our images of war. Our planning and plans for war are, therefore, important roadmaps. Our categories of warfare will influence how we conduct our operations in the future. In this case, two sets of norms are critical.

Following Katzenstein (1996), we can differentiate between constitutive norms and prescriptive norms. The former refers to a set of norms regarding our identity, while the latter refers to a set of norms encouraging or discouraging certain behaviour. Following this logic, we can talk of certain prevailing values in the West today that make us who we are and what we deem acceptable military behaviour to reach policy ends. For instance, in the Kosovar village of Caglavica in 2004, Swedish soldiers took a beating for more than 12 hours with sticks, bottles, and stones thrown at them, but they did not open fire. Neither did they, despite having the capacity to do so, attack the villagers during the night using their superior night vision capability as a force multiplier. Change century to the 'Thirty Years' War. Again with Swedish forces fighting on the European continent, there are hardly any doubts that Swedish units committed what we now would consider atrocities.

One could also argue that current soldier ethos—and what military sociologist Anthony King has called “infanterisation of war”—are problems for Western counter-insurgency efforts. Is part of the problem for the West that we are trained for and our doctrines are written for a war on the Soviet Union in Central Europe? Can we have a truly “adaptive mindset,” or do we need to choose our images of war? Regardless, these arguments suggest that since there is inertia in our minds of what war will look like; all we have to do is investigate the outcome of the work of groups such as ourselves. The categories, operation types, and strategies that we come up with are the ones we can expect to be pursued and conducted in the medium-term future. In short, since we will fight the wars we can imagine, we can already now understand how wars will look in 20 years.

Second, even if you are not a constructivist, you can still reach the conclusion that we already know what wars will look like in the medium-term future. The reason, from a rationalist point of view, would be to stress partly the plans and planning that are conducted in military staffs and headquarters around the globe. The planning exercises that take place and are contrived in military colleges are also part of this and are influenced in part by the long life cycle of today's advanced military hardware. For instance, we know that Sweden will not wage nuclear war even in 20 years' time. It simply does not have the know-how and technological capabilities to build the warheads and missiles needed to wage nuclear war. It is not uncommon to talk of advanced weapon systems having a life cycle of 30 to 40 years from development to retirement. Whatever capabilities we now have or are developing will be the capabilities that we have at our disposal in the medium-term future. This line of reasoning also points to the fact that we already know quite a bit about future war.

There are, however, two important problems with this approach. First, as Clausewitz reminds us, war, we control the dynamics equally as much as our opponent does. Thus, even if we assume that our mental frameworks rule our behaviour, the opponent is likely to differ in terms of how the war should be conducted. This interaction is inherent in war. In that interchange of strategies, there are bound to be surprises and processes of learning, adapting, and copying (Horowitz 2010). It also follows that our opponent may create different military capabilities that can counter ours. We, thus, cannot be completely sure that actual war in the future will follow exactly how we currently think and prepare for war. Elsewhere, I (2011) have differentiated between four types of asymmetric conflicts: configurative, power, organizational, and norms. Perhaps the most challenging of these will be asymmetry in norms, which this paper will address in the following section.

Second, even if the argument that how we prepare, plan, and think today reflects how we will do so in the future was a perfect match, it does not really help us a great deal in limiting the alternatives. Typically, long-term defense planning attempts to cover all conceivable bases when describing future war. For example, the document at hand includes conflict categories and scenarios such as great-

power war, small-power war, and non-state war; we also consider potential conflict scenarios as nuclear wars, conventional wars, and asymmetric wars. This vast range usually makes it very difficult and impractical to establish priorities. On the one hand, for instance, Sweden may feel constrained by its limited resources and thus tough priorities are needed. The US military with considerably more resources may not need to set such priorities; but, on the other hand, perhaps increased guidance and priorities are exactly what is needed in the US context, too. Note, however, that this is not necessarily a major criticism of the two NIC documents. I think they are strong, seem thought-through, and make a very convincing case in futurology for the scenarios.

The one major bit of criticism, though, that can be levelled against the documents is that they underplay the role of ideas and norms in strategic decisions, such as what military capabilities a state acquires, when it goes to war, and how it conducts war. Neither of the documents, moreover, question fundamental features of the political order today.

Notions of political order and their impact on war and warfare

Following Kalevi Holsti (1996), my starting point in this argument is that our ideas of political order have an impact on three things: 1) how we institutionalise large-scale violence, i.e., the organizations that we create to conduct war; 2) for what purposes we conduct wars; and 3) how we conduct war. In the following, I will outline this logic and, derived from three-tiered global political order, identify three challenges that are not only bothersome but that are also most-likely scenarios for the West. A main conclusion from this may be that we create problems for ourselves.

Modern archaeologists of humankind now know that rather than a serial evolution from Neanderthals to Homo sapiens where one species replaced the other these two species co-existed for thousands of years with interbreeding taking place. It is logical that other forms of interaction took place, as well, including conflict and competition for food, resources, and housing. I claim is that we, too, now live in a period of change in human history and fundamental transition in human social and political order. War and conflict are inherent parts of these orders. But war plays different roles in these processes. It is creator, destroyer, and maintainer. Types of war and conflict will therefore co-exist. It will not be a time of only interstate war or only intrastate (or extra-state) war; it will be a transition period where both types of war and conflict will exist at the same time. This is not the first time such a set of competing forms of political order have existed. Hendrik Spruyt (1994) has demonstrated that in late Medieval Europe, emerging territorial sovereign states co-existed with city-states and empires, as well as overlapping authorities of the Church, world leaders, and feudal princes. Rivalry between economic and political systems ensued. It took, arguably, several hundred years of wars and unrest to settle the European state system.

Today, three major forms of political order co-exist (Cooper 2003). Within each political regime (or system of thinking), the various actors share similar interpretations for the concepts of power, justice, war, violence, peace, victory, and the relationship between private and public. Between the different forms of political order there is not a shared understanding of these key concepts. First, we have what we can call pre-Westphalian political order. We find this most often in the developing world; indeed, the lack of a Western version of statehood is a well-known problem among scholars interested in the developing world. My Western understanding of the pre-Westphalian system shares, for example, many similarities with what Jackson (1990) termed “quasi-states. In a way, these are political systems that never went through the internal processes of state-building and instead have experienced a mixture of external “life-support” and “too tight embraces”—to use Astri

Suhrke's (2010) words—from an “invited Leviathan” (Angstrom 2008). Note that the lack of a strong Westphalian state system does not imply that there is chaos. Quite a few studies have instead demonstrated the quite remarkable longevity and stability of this pre-Westphalian order. Not only has it proven successful in terms of survival, but some individuals and collective actors can thrive and prosper within the order. Still, weak statehood also means that there are alternative levels of identity formation. Clans, families, and ethnic groups remain viable alternatives to the state.

Second, we have a remaining Westphalian political order. In East Asia, parts of Latin America, and Central and Eastern Europe, the Westphalian state order remains strong and vital. Paradoxically, the wars that broke up Yugoslavia strengthened the state system in that region. Processes of centralization and capital accumulation continue unchecked in these regions, and the state capitals are capable of extending control over territory and population to an increased degree. Processes of identity formation are increasingly joined with statehood. Initiation in adulthood happens with clear state symbols, such as the right to vote and conscription.

Third, primarily in Western Europe and the US, globalisation, increased interstate trade, and porous borders are transforming the political order. This is especially so with the emergence of the modern European Union, something political scientists still struggle to define and conceptualise. Following Cooper and Sperling (2009), we can talk of an emerging post-Westphalian form of political order. Here, again, identities become disjointed from the state. Professional armies and the emergence of private security options are partly decoupling the state from security and identity.

For the purposes of analysis, I understand war not only as an expression of agency but from functional perspective, as an institution within the forms of order. War will *maintain* the order. Because war is seen—from within this system—as only useable by a certain category of social actors; whenever war is fought, it confirms the social order. Other violence is understood to be something other than war. War is, therefore, central to work out differences between actors—to handle conflicts. And, it has been understood to be the final arbiter of these differences of opinion. Thus, when in doubt, use war, because, however harmful, it is the one institution that confirms the system. And it is one where the rules of the game—and practices of war—are more or less coherent within each “system of thought and values.” Within the Westphalian regime, war has been stigmatized, or even prohibited in various forms of international law if there was a state involved. If other actors engaged in organizing large-scale, politically motivated violence, it was not considered to be war, but a form of crime. In this way, war confirmed the existence of the state throughout the Westphalian system, which by the war was re-created continuously. The Westphalian order is confirmed continuously through a long list of institutions other than war, international intergovernmental organizations such as the UN, diplomacy, foreign aid, and international trade.

Simultaneously, I suggest that war maintains the non-Westphalian systems of order, too. But, these have a different version of war and, consequently, a different form of social and political order is reproduced and maintained, one that is decentralised and small scale, with skirmishes and limited combat, rather than mass battles as the main kinetic interaction. This implies that there is no need for larger armies, which means that there are few incentives to bureaucratize and make taxation more efficient, which again reinforces a decentralised political order (Angstrom under review). Even in this kind of order, war retains political order. Here, it is not a state that is created or recreated, since the war between the actors in this system of thought is not carried out large-scale, but through small wars where skirmishes, ambushes, and looting dominate warfare. The consequence is that this type of war generates and regenerates a different polity on a continual basis.

War, while it effectively maintains a particular form of social order, is also the major challenge for this particular form of order. War was a central part in creating this system, but it is also the one force that can unravel it, if one lets it go. And this is the second function for the rivalling social political order. It *destroys* the old system by being the major form for rivalling the existing socio-political order. These forms of war will be fought between different systems of thought, different perceptions of what constitutes civilians, victory, and indeed war itself. The coming 30 years will be, I claim, a transition period where both types of war and conflict will exist at the same time; just as Neanderthals and Homo sapiens interbred, so may the types of war and conflict. And in these clashes, war will destroy the social and political order of one or *both* of the actors.

If we understand war from a functionalistic perspective, war is also a process of emulation, learning, adaptation, and adjustment. This also means that war between forms of order will not only be a force for transformation of the actors' political systems but also a force for transforming warfare itself. We have only seen this in Afghanistan so far. The war in Iraq in the 2000s was not a challenge to destroy things; it has confirmed the state. But the evolution in Central Asia and in the Afghan-Pakistan border regions is the sign of things to come where these systems of thought collide.

This form of conflict will occur between actors representing different interpretations of social and political order, non-Westphalian versus Westphalian. It is worth noting that this development cannot be equated with "the West Against the Rest" hypothesis according to a Huntingtonian cultural logic. First of all, conflicts will not arise between cultures, like earthquakes in the cracks between tectonic plates, as Huntington claimed. Already we can observe conflict between different factions representing nongovernmental regimes in Pakistan and Afghanistan, two states with essentially Westphalian orders—and these are two countries located in the same culture, according to Huntington. Second, Huntington's culturalist argument is essentially pessimistic, because he claims that the basic cause of conflict is the diversity of cultures. Thus, because there are likely to be differences among people in the foreseeable future, conflicts will also continue. The earlier points made about different types of political order are, in contrast to Huntington, an optimistic thought. Since conflict is a result of different perceptions as to what is the correct interpretation of various concepts, we can learn to think differently. The archtypical case of a conflict under the third type of conflict is the conflict in southern Central Asia, which has lasted for over 30 years and involves globalized post-Westphalian actors, Westphalian actors, and decentralized nonstate actors. In all respects, this is a form of conflict where the involved parties have to change their fundamental ideas about key concepts, such as justice, power, and the like. If this war is a "struggle of wills," only very fundamental societal transformations will constitute "victory."

It is equally important to note that these types of conflict are not equivalent to the dichotomy between the regular and irregular. There are several typical Westphalian wars and conflicts in which irregular warfare has been a central part of the war. In a way, it is the inclusive presence of the idea of a dichotomy between regular and irregular confirmation that we live in a Westphalian system. The word regular means literally "regular" or normal. It could be argued that the establishment of a dichotomy where one considered to follow the rules, while the other does not, by implication, suggests a normative statement about what is desirable. We are usually not, of course, arguing that it is good to break the rules.

Take two poignant examples of the challenges for the Westphalian and post-Westphalian system of order: The separation of *public* and *private*, as well as the separation of *civil* and *military*, are inherent norms that made the Westphalian state possible and that also underpin the two NIC documents under consideration here. As keen followers of politics and conflict in the developing world will tell

you, however, this separation is far from self-evident. Those knowledgeable about European history also will far better understand politics in Somalia or Afghanistan using the lenses of absolutist monarchies than through the spectacles provided by modern European states. In an essay titled “Nixon in Hell,” Richard N. Lebow (2003) portrays how the distinction between public and private is a specifically Western norm and one which evidently is not shared by many rulers in the developing world, where, in many cases, the revenues of state are considered to be the ruler’s private property. By placing this logic in a US setting with Richard Nixon, Lebow’s analysis aptly captures how we—as Nixon does when being tortured in Hell for things he did as holder of the office of the US Presidency—would struggle with a system that does not recognise the separation of public and private.

We do not have to go to essayistic endeavours to illustrate how uneasy we become with actions that undermine the separation of public and private. The intended killing of political leaders of our opponents is an even clearer example, as illustrated by the different fates of Saddam Hussein and Osama bin Laden. US forces captured Hussein and handed him over to the Iraqi authorities for prosecution and later conviction and execution. Although there was some criticism, it was primarily levelled at the new Iraqi government for keeping the death penalty. However, in the case of Osama bin Laden, US soldiers seemingly were forced to kill him on the spot, rather than capturing him for a US court to decide his fate. Suddenly, an ethical and legal debate has emerged about the legitimacy of killing the political leaders of one’s opponents. While understandable, the strategic narrative of the West intervening in other states has for the past 20 years been one of separating the leader from the population by claiming that we are conducting a war against (any given leader’s name), not the (any given country’s) population. The consequence of this narrative is that the leader is personalized rather than made a holder of an office. Public office is thus turned into a private matter; the distinction between private and public that we want to maintain and that underpins the state is threatened. In stressing this newer strategic message, we undermine ourselves and our form of political order.

A second example is how altering our understanding of the separation of civil and military would challenge and risk changing us in ways we are not necessarily comfortable with. This problem, again, is partly driven by our own strategies and is, therefore, a prime example of how war is a process of adjustment and copying. The current war in Afghanistan may not necessarily leave us in a position where our opponents adjust to our will; instead, we may end up copying the Taliban to a further extent than we originally thought. The problem is that military force has become primarily a tactical tool (Smith 2007; Angstrom & Duyvesteyn 2010). Because it is of tactical utility, we will struggle to conduct war in mixed-war contexts. If we fight an opponent who does not distinguish between civilian and military the way we tend to do, it will be difficult to conduct any reasonable targeting with kinetic or non-kinetic means. More importantly, though, the way we prepare for war makes a sharp distinction between civil and military and also between war and peace, where different judicial systems were meant to operate. This Western zone of comfort, however, is increasingly challenged when conducting war in the developing world. The result has been an increased focus on tactics. If we only kill enough, or kill the right ones, the tactical victories would be translatable into strategic effects.

What if, to reach strategic ends, there is a need to adapt not only militarily, but also politically? Are we prepared to weaken the distinction between civil and military, upon which so much of our political and legal frameworks hinge? Traditionally, civilian in the Western context has meant an individual that is not a member of a militia or the armed forces. If we face an opponent who does

not understand civilian in this way—instead using “part-timers,” for instance—our forces will struggle to identify proper targets and question whom to protect.

Recasting the distinction and contents of the dichotomy between civilian and military presents three bad options. First, recasting civilians to be exposed as a state is hugely controversial. It would, for example, entail that the West adapts to the pre-Westphalian system. It would, for example, imply treating development aid in strategic rather than altruistic sense. If we compromise our belief systems, one can even start to discuss whether or not we have already lost the war.

A second unfavorable option is to change what we mean by peace and war. The two options are, of course, interrelated, since we do not normally associate killing civilians with war. Critically, however, it may be necessary to stop making a sharp distinction between war and peace. This is troubling, since it would undermine international law and quite a few national laws as well, but it also has some promise. If we return to an understanding of organized violence as an arbiter and a constant presence, we may be better off fighting today's types of wars. This is tempting, since it would reinforce and be in accordance with the fact that force has tactical utility. However, another drawback is that this would effectively leave strategy out of the war. If we do not have a political end in mind for the war, we would never be able to tell whether or not we won, we would not be able to hold our leadership accountable, and we would not be able to separate war from peace. Again, would not such a development imply that we have adapted to the will of our opponent?

The third bad option would be to force the opponent to adapt to our understanding of order and war. As soon as that would happen, the West's superior technology, superior firepower, and capabilities for large-scale warfare and integrating the branches would overpower the sometimes-ragged local actors. The problem is that it is also clear to our opponents that playing the game according to the West's standards is not an option; doing so would imply suicide to fight the West according to the West's way of doing and thinking strategy. Moreover, we can hardly accredit the Taliban, al-Qaeda or other militants for not being guile, cleaver, and skillful.

A third example is directly driven by globalisation. Because of modern communications, we have near-worldwide instant exchange of ideas and spread of ideas. Images and information of living standards, role models, and political ideas can spread quickly and more or less freely. Egyptian authorities tried to shut down social media and computer networks in an attempt to stop the demonstrations in central Cairo. They blocked Twitter, Facebook and other social-media sites, but the demonstrators maintained contact with each other and spread information through dating agencies and dating chat rooms that were still open. “Let's meet at Tahir for a kiss at seven,” suddenly had a new—and for the Egyptian authorities—threatening meaning. The spread of ideas is not necessarily a problem in and of itself, but widespread access to information so far seems to have generated a sense of entitlement, not duty.

If we step back in history for a short while, we can witness how European kings maintained social and political order by granting royal privileges. Some were exempt from taxation, some were granted housing and land, and some were given the opportunity for retirement benefits, far earlier than modern-day pensions were established. In response, nobility, priests, free peasantry, and burgers paid their taxes and made arms and locals available for the king's use. The important part of this exchange was that privilege was turned into a sense of duty. An important part of being an adult citizen gradually was interwoven with enrolling as a conscript. Far earlier, of course, the nobility started to pride itself, and define itself, in relation to other segments of society by allegiance, duty, and loyalty as the *leit motif* in life. It seems today that increased individualization and freedom from the state, i.e., a privilege, has not turned into a sense of duty among the young in many parts of the

developing and developed world. Instead, images of others' seemingly more wealthy lifestyles spread quickly, generating a sense of entitlement, i.e., a sense of craving more. This may appear to be a conservative viewpoint, but it is not meant as such. Just observing images of the wealth of many Western societies today does not reveal the hard work that has been put in to create that wealth. Nor does it reveal the extent to which the wealth of the globalized North was made possible at the expense of the South.

As has been evident the last few months, the West is ambivalent toward the Arab Spring. The concept of democracy is deeply entrenched in our identity, so supporting the demonstrators should seem quite reasonable. At the same time, however, we show the same anxiety over change that was felt early on in the fall of 1989 when the Eastern Block crumbled. This time, voices have even been heard implying "stability" is even more important, since those striving for democracy this time are Muslim; there is a fear among some that Islamic fundamentalism will dominate in a democracy, rather than the tolerant traditions within Islam rising to the fore in elections. If we were to support the authoritarian Arabic leaders, however, what does that tell us about ourselves?

Conclusions: Identifying challenges

In this paper, I have primarily engaged with the question of what current trends in war and warfare will continue and strengthen over the coming decades. I have done so using three different approaches. First, extrapolating from recent and current trends seen in the UCDP dataset, we can possibly project that future armed conflicts will primarily be intrastate, relatively low-intensity affairs, occur in the developing world, and number around 30 to 40 annually. There will be some instances of interstate wars, but these will be few. Increasingly, armed conflicts will be about how states are governed, rather than about the make up of the state's people and territory. This approach has some drawbacks, though, as discussed above.

Second, I suggested that we already know quite a bit about future warfare through self-reflection on how, what, and when we plan and prepare for war as well as our current technologies of warfare. Based on this, we can expect that the US (not the entire West) will prepare for many types of armed conflict: global and regional, against great-power opponents and terrorist groups, and fought with weapons ranging from nuclear weapons to small arms. This approach, too, has some problems, most notably that armed conflicts are interactions where opponents govern your behaviour to the same extent that you govern theirs. Thus, deducing what future warfare will look like based on our planning and capabilities will only capture a glimpse of future war.

Third, I suggest an alternative: that norms of political order will have a major influence on the reasons why we fight, how we fight, and how we organize for fighting. My main criticism against *Global Trends 2025* would be that it does not sufficiently take into account such ideational factors. If one follows the logic of a three-tiered global political order, it is possible to outline more uncomfortable scenarios.

The challenge is that we are putting ourselves in these uncomfortable positions. The current strategies of the West are especially ill prepared to deal with these scenarios. Problematically, the behaviour of the West is one of the causes of this trend. Our current behaviour strengthens the very same tendencies that challenge us and undermines how we understand justice, right, public, private, civil, military, and—indeed—also peace and war. We are adapting to our opponents' values at the moment. And it is precisely because we do so that we struggle with the Arab Spring. The

globalization of our values—democracy, capitalism, and freedom from oppressive leaders—creates among the impoverished of the developing world a sense of entitlement when given the privilege to govern. Not duty. And it is precisely a sense of duty that has upheld social and political order in the West. It made the differentiation between public and private possible—and it made a division of labor possible between the civilian and military realms. As these divisions erode, we may come to look more like our opponents. This will—quite possibly—make us more effective in war against them, but what will be the costs of placing such a premium on tactics?

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7. The Future of Western Warfare: Coalitions and Capability Gaps

Theo Farrell

The US National Intelligence Council's (NIC) report *Tomorrow's Security Challenges: The Defence Implications of Emerging Global Trends* (TSC) presents four future worlds – concert of powers, fragmented international system, rise of non-state networks, and return of great-power confrontations – as a heuristic device to identify and explore the challenges facing American policymakers and strategists out to 2025. TSC says nothing about the modalities of US military power projection in these four futures. Of course, this is appropriate given that TSC is a product of the NIC. But equally, it is appropriate for participants of this workshop to ponder what form US power projection is most likely to take.

One may predict, with a fair degree of certainty, that for the foreseeable future the United States will seek where possible to project military power in partnership with liked-minded states. This may occur within a formal framework, such as NATO, or through informal arrangement, i.e., an ad-hoc military coalition. Wartime partnership brings political and military benefits. Politically, it increases the legitimacy of the military campaign. And even for a superpower, like the United States, partnership in war offers military advantages. The ongoing war in Afghanistan points to three such benefits, in particular: More boots on the ground; increased civilian capacities; and more military specialists with a diversity of expertise, especially special operation forces (SOF) and other key enablers, such as medical, engineering, and counter-Improvised Explosive Device (CIED) personnel.

To be sure, going into war alongside partners brings its own set of problems. At a minimum, there are coordination problems, both strategic and operational. Some military operations may require the authorization of all partner governments, and this reduces the agility of campaign command. Within the campaign itself, many national militaries create complications in the command chain and in planning, logistics, and the conduct of operations.

Yet for all these problems, the advantages of partnership in war outweigh the disadvantages. This is especially true, as noted, because partnership may take many different forms. I start by making the case for coalition warfare focusing on a core of states within the North Atlantic Treaty Organization (NATO). I go on to discuss some of the capability shortfalls of European coalition partners. While technology is the most obvious capability gap, I identify less-noted shortfalls in strategy and law. Finally, I discuss the implications in terms of the four futures presented in TSC.

Coalition warfare and the “fighting core”

It is hard to imagine a scenario where the United States would *go to war* unilaterally inside the next 14 years. Discrete unilateral use of force is possible, indeed likely. But any full-blown military campaign will almost certainly involve the United States in partnership with other states. Depending on where a future war lies on the necessity-discretion scale, partnership will come about due to demand or supply pressures. In a war at the necessity end of the spectrum, such as the 2001 invasion of Afghanistan, there will be supply pressures from US partners; indeed, any such war is likely to invoke Article 5 of the NATO Treaty. In a war situated closer to the discretion end of the scale, such as the 2003 invasion of Iraq, there will be demand pressures from within the US government to

gather partners in order to increase the international and domestic legitimacy of the military campaign.

The good news is that the United States has a number of fairly reliable military partners, i.e., Western states with a range of military capabilities and the willingness to project force globally alongside America. There is a core of states within NATO that have demonstrated this war-fighting potential, as well as Australia. Crucial here will be NATO's reinvention of itself as a global security organization. In truth, NATO has failed to develop the machinery to project power globally; the NATO Response Force is a disappointment, having never deployed and eventually been downgraded. At the same time, NATO remains committed to its global security mission, and this is reinforced in the alliance's New Strategic Concept adopted in November 2010.

As a large alliance of now 28 states, NATO packs a powerful legitimacy punch when it comes to war. Indeed, as a general principle, the most powerful states carry more authoritative weight in customary international law. This principle was tested to an extent in NATO's war against Serbia over Kosovo in 1999. In this case, NATO chose not to assert the lawfulness of humanitarian intervention as an evolving exception to the general prohibition in international law against the threat or use of force against other states. However, NATO's intervention was still widely recognised as legitimate even if, strictly speaking, it was unlawful, because this war was conducted by such a powerful group of states with clear humanitarian purpose.

Against this are some downsides. As a general rule, formal alliances are more unwieldy than ad-hoc coalitions. They have drawn out decision-making processes that can interfere with the military command of ongoing campaigns. Moreover, the less martial states within the alliance may restrain a more robust strategy.¹ The problem is compounded by size and diversity, in that large alliances offer more opportunities for disagreement over strategy. NATO faces all these problems.

These coordination, size, and restraint problems were all evident in the Kosovo air campaign. NATO's senior decision-making body, the North Atlantic Council, was tasked to authorize whole categories of targets. But NATO capitals ended up imposing a target-by-target approach requirement on the campaign commander, SACEUR Gen. Wesley Clarke. Sixty-four percent of the fixed targets required higher approval, with the more sensitive targets requiring approval from all 19 NATO capitals. At the end of the 78-day bombing campaign, there were some 150 fixed targets still awaiting approval from NATO capitals. NATO's eastward expansion since the Kosovo campaign, growing the alliance from 19 to 28 members, has exacerbated its cumbersome character.

The current war in Afghanistan, formally NATO-led, further demonstrates the problem of caveats. Some NATO states have imposed stipulations to limit the possibility of their forces being drawn into the war. Some, such as Belgium, Bulgaria, and Greece, will not even permit their forces to leave International Security Assistance Force (ISAF) bases. Moreover, some of countries with large military forces, namely, Germany, Italy, and Spain, have deployed only to the more permissive northern and western regions of Afghanistan.

But Afghanistan also demonstrates the potential and importance of military partnerships for US war efforts. In crude numbers of boots on the ground, the role of partners has been essential. At the height of the European contribution, in mid-2010, the partners were contributing 41,500 troops to ISAF whilst the United States was providing 78,500. Moreover, the contribution of some states from 2006-2009, when the United States was focused on Iraq, was little short of essential: Britain, Canada, and Holland held the line in the south, leaving the US Army to concentrate on the east during this period.

Table 1. Key US military partners in Afghanistan: Number of troops, 2010

Australia	1,550	Germany	4,350
Britain	9,500	Holland	1,700
Canada	2,800	Italy	3,300
Denmark	750	Poland	2,500
France	3,750		

Data from ISAF Placemat, June 2010

Of course, as noted, there has been considerable variation in the capabilities and will of partners, ranging from Denmark's small war-fighting force to Germany's large and largely peacekeeping force. We also need to recognize that both capabilities and will have shifted over the course of the campaign. Britain, Canada, Denmark, and Holland all rapidly beefed up their forces in the south as the scale of the military challenge became evident. Germany has come under the most criticism for the strict caveats it has imposed on its force. But even here, the picture has changed. By 2010, there was open recognition in Germany of 'Krieg in Afghanistan.' Previously, Germany's political elite refused to recognise that ISAF was engaged in war. Moreover, in 2009-2010 German forces engaged in a tough fight in Baghlan province (especially around the 'highway triangle').

In sum, the ISAF campaign suggests that there is a sizeable group of Western states that could be partners in any future US war effort. Table 1 lists the most significant US partners in ISAF in mid-2010. I call this group the "Fighting Core" of NATO (+ Australia). Of course, the circumstances of any future war will be critical in determining who will be prepared to sign-up for war and also the form of partnership and contribution, i.e., NATO versus an ad-hoc coalition, special operation forces versus logistical support.

As a rule of thumb, NATO has been more advantageous in terms of increasing the legitimacy of a military campaign, but it is typically less advantageous than ad-hoc coalitions in terms of a campaign's unity of effort.² It is easier for the United States to exercise firm military leadership within ad-hoc coalitions. Indeed, the 1991 Gulf War and 2003 Iraq War both demonstrated that coalitions typically involve a core of war-fighting states, in addition to a larger grouping of war-supporting states, i.e., providing basing and logistical support, and some modest air, naval, or even ground forces. In both campaigns, the US multinational force commander was able to ensure unity of effort within the war-fighting core, which comprised the US, Britain, and France in the 1991 Gulf War and the US, Britain, and Australia in the 2003 Iraq War.

We should recognise the differences within the Fighting Core. I would suggest a rough ordering of three tiers, based on political will and military capabilities. For the United States, tier 1 and 2 states are those that can bring the most resources to bear during coalition wars. Tier 3 partners are also worth having on board, but, for a variety of reasons, bring less capability. Of course, the order of states within these tiers may be expected to change over the next 14 years.

Table 2. The Fighting Core in Select US-led Coalitions of War, 1991-Present

Tier 1	Tier 2	Tier 3
Britain	Australia Canada France	Denmark Germany Holland Italy Poland

Ranking: Author's own.

Britain belongs in a category of its own as the US's sole tier-1 partner. France comes close to Britain in terms of global reach and deployable forces. The gap between them is in deployable land forces and will. France deployed a light division in the 1991 Gulf War and could do so again. But in recent years, Britain has twice deployed a heavy division in a US-led war, in 1991 and 2003. The British military has been hit hard by cuts to the defence budget for 2011-2015. The Royal Air Force is to be slashed from 12 to six fast-jet squadrons, while the Royal Navy will similarly shrink from 23 to 19 frigates and destroyers. France will keep far larger air and naval forces in terms of numbers, though Britain is acquiring a range of next-generation air and naval platforms. Much uncertainty still surrounds the Royal Navy's Future Carrier Program. The British Army will suffer the least cuts among the services. It will only lose one brigade, leaving it with five multi-role brigades, plus an air assault brigade and the Royal Navy's marine brigade. In addition, coming out of the 2010 Strategic Defence and Security Review (SDSR), the British Army has managed to keep the requirement to be able to deploy a heavy division. Finally, it is interesting to note the British military assumption that any future war would be fought alongside the Americans. The British military's *Future Character of Conflict* paper (the British version of *TSC*) explicitly states: "It is extremely unlikely that the UK will conduct warfighting without US leadership." Thus, in terms of willingness and ability to wage war with the Americans, Britain remains well ahead of the pack.

France is the next most militarily capable state in the Fighting Core but gets relegated to tier 2 because of its awkward strategic relationship with the United States. Moreover, given its military potential, France has been a disappointing contributor to the ISAF campaign. Australia and Canada, also in tier 2, have far smaller armed forces than France, but both have been significant contributors to US-led campaigns. The Australian armed forces contributed around 2,000 strong to the US-led coalition in the 2003 Iraq. Most of these were navy and air force personnel. But, in both the 2001 invasion of Afghanistan and the 2003 Iraq War, Australia provided a sizeable SOF contingent. In recent years, the Australian contingent, comprising a combined arms battle group, engineers, mentors, and SOF, has operated in support of the Dutch task force in Uruzgan Province. In sum, Australia belongs in tier 2 for its recent track record of contributing to US-led coalitions and specifically for its SOF contribution, which is a key asset for the type of wars the United States is most likely to wage in the near future.

In Afghanistan, Canada contributed beyond what its capacity would predict, deploying almost 3,000 troops from an active force of around 66,000 (including an army of only 35,000). The Canadian Army has also demonstrated its willingness and ability to fight in difficult conflict zones. Canada has suffered 154 personnel killed in Afghanistan since 2001, which is the third-highest number of fatalities in ISAF and the highest number per force size in ISAF (Britain has suffered the second-highest rate of fatalities at 362). Whilst Canadian combat forces are due to withdraw from Afghanistan this year, the Canadian Army will leave behind a 950-strong training mission, and Canada will continue to lead the Kandahar Provincial Reconstruction Team (PRT). In other words, Canada has been a reliable and resilient military partner in Afghanistan and hence belongs in tier 2 of the Fighting Core.

Tier 3 includes states with large military forces but modest useable capabilities – due to political constraints or military limitations – such as Germany, Italy, and Poland. Tier 3 also includes states, such as Holland and Denmark, with small, deployable, war-fighting militaries. For the Dutch, Afghanistan was a chance to show their steel and shake off a deservedly terrible reputation from the 1992-95 Bosnia campaign. In the event, the Dutch took a cautious approach to using force in Uruzgan Province; this created tension with a more gung-ho US special forces task force operating in the north of the province. This more cautious approach by the Dutch task force was consistent with Dutch strategy for Uruzgan, but it is also possible that political pressure to avoid Dutch casualties may have been a reinforcing incentive. Denmark is the most martial of the Nordic states, and the Danish had already shown how tough they were in Bosnia. Once again, they proved their mettle in central Helmand Province. It might be argued that at less than a thousand personnel, the Danish contribution to ISAF is not sufficient to qualify as a ‘significant’ partner. But, both the Danish and the Dutch contributions need to be seen in the context of contributing to a multinational brigade-plus sized package.

Capability gaps

We have had the good news: There is a Fighting Core of Western states that are viable partners for any future US-led military campaign. Now, the bad news. These potential military partners collectively, and individually to various degrees, have three capability gaps: Technological, strategic, and legal.

The technology gap

The transatlantic gap in military technology is old news. Way back in 1999, Gompert, Kugler, and Libicki warned that NATO needed to *Mind the Gap* that was opening up, with Europe lagging far behind US investments in Revolution in Military Affairs (RMA) technologies. The key technologies then were in information technology (IT), reconnaissance, and precision strike. This past decade, European militaries have attempted to close these gaps. However, national conditions — military culture, existing modernization programs, and defense budget cuts — have produced great variation in European responses to the US military transformation. Germany raced ahead in developing a doctrine for military transformation, but bureaucratic obstacles have delayed investment in new technologies. In contrast, France pushed on with developing its next generation of technologies but has been slow to develop the concepts and doctrine for real transformation. Britain fell somewhere in between with a more balanced approach to developing both technologies and supporting

concepts. The net result has been that by the late 2000s there were many transformation gaps opening up *within* Europe.³

The situation has become more complicated as a result of the wars in Iraq and Afghanistan. The US military has redirected some investment away from the potentially techno-centric wars of the future to meet the demands of the human-centric, counterinsurgency wars of today. Some argue that current wars require that more be spent on less high-technology platforms, such as Mine Resistant Ambush Protected vehicles (MRAPs) and Unmanned Aerial Vehicles (UAVs), as well as continued investment in Intelligence, Surveillance, Target Acquisition, and Reconnaissance (ISTAR) and networking of military forces. Those NATO partners that have been in the fight in the south have reequipped their forces for the campaign at hand. For example, Canada is upgrading 550 of its Generation III Light Armoured Vehicles (LAV III) to provide better anti-mine and CIED capabilities. Canada also urgently acquired some old technology, namely, *Leopard II* main battle tanks, which were rushed to theatre. Britain is at the forefront in Europe of arming for small wars. For example, the British Army has purchased some 400 MRAPs for the campaign in Afghanistan, with orders for another 300. The Royal Air Force operates *Predator* and *Reaper* UAVs, is developing its own *Watchkeeper* UAVs, and following the SDSR has launched a new Combat ISTAR program. Upgrades to Britain's strategic and operational network have improved the ability of the British military to push Full Motion Video (FMV), biometrics, and other intelligence data into and around the battle space.

Thus, the technology gap for small wars has closed between the United States and key tier 1 and 2 war-fighting states. Of note here is that France is procuring some 600 new infantry fighting vehicles with enhanced blast protection. For the big European militaries less engaged in war fighting in Afghanistan — namely, Germany, Italy, and Spain — military modernization continues to be focused on future conventional war with some investment in RMA technologies. Yet, here the technology gap continues to grow.⁴

The strategy gap

Less well appreciated is the transatlantic strategy gap that has emerged in the post-Cold War era. Simply put, Europe states have lost the art of strategy. This is self-evident in the Afghanistan campaign. NATO assumed command of ISAF in 2003, but it did not produce a Comprehensive Strategic Political-Military Plan until April 2008. Even then, ISAF did not generate a coherent campaign plan until a year later, with the arrival of US Gen. Stanley McChrystal in the summer of 2009. In essence, it took American engagement for NATO and ISAF to develop a strategy for the war. Prior to 2009, the United States was preoccupied with the Iraq War, and the European allies were unable to formulate a strategy without America's lead.

Of course, this problem pre-dates Afghanistan. Western use of force became divorced from strategy in the humanitarian interventions of the post-Cold War era. In Northern Iraq, Croatia, Bosnia, Somalia, Haiti, Sierra Leone, Kosovo, and East Timor, Western states allowed themselves to be drawn into other peoples' wars. Western militaries fought not to defeat an opponent, but to achieve a range of less decisive goals — to enforce a peace, protect a population, disarm warring parties, and so forth. In most of these cases (Sierra Leone and East Timor are exceptions), Western states failed to develop coherent strategies for these conflicts for a variety of reasons.

The main reason was that the processes for generating campaign objectives and forces were de-linked. UN Security Council (UNSC) resolutions provided the mandates for all of these wars except Kosovo. Hence campaign objectives were generated through international diplomacy and mediated by the requirements of international law. In contrast, the contributions to these humanitarian campaigns were generated by various national political and bureaucratic processes. As a general trend, states tended to talk tough but failed to deliver the forces necessary to achieve the mission. Collective responsibility within the UN framework enabled individual states to shirk responsibility for failing humanitarian campaigns. Thus, Britain and France, Europe's major military powers, let the humanitarian situation in Bosnia fester for three years, and the blame was shared across a broad rainbow alliance of states involved in the UN Protection Force (UNPROFOR). There was also a significant element of posturing and symbolic use of force, not to impress opponents as part of a coercive or deterrent strategy, but to impress domestic audiences back home that their government was "doing something" about that humanitarian crisis.⁵ It can be argued that a similar dynamic is at play in the current NATO campaign in Libya. Political opportunism and posturing triggered British and French military intervention, without an agreed strategy in place.

The capacity for strategy making has also been retarded in the West as a consequence of the Cold War, when Western strategy was focused on the technicalities of nuclear targeting and conventional force ratios on the intra-European front. Military technicalities were swapped for legal technicalities over two decades of humanitarian campaigning. The real matter of strategy — linking war objectives, resources, and politics — was lost from view, and the skill of producing a plan that marries these moving parts was also lost.

These two fundamental problems — collective irresponsibility and an overly technical, apolitical approach to campaign planning — dogged the Afghanistan war until late 2009 when the United States finally took responsibility for the war and appointed a new campaign commander who understood that the conflict was primarily about politics. This goes to suggest that the art of strategy has not been lost in America, though the United States did commit some grievous strategic errors in Iraq and Afghanistan under the administration of President George W. Bush. In Britain, the military openly recognizes its failure to think strategically about the challenges in Iraq and Afghanistan and, indeed, the Chief of the Defense Staff, Sir David Richards, has directed the creation of a military strategy shop within the Ministry of Defense (MOD).⁶

The legal gap

European states are bound, in a way that the United States is not, when it comes to legal restrictions on the use of force. A basic distinction needs to be drawn out between international law on *when* and *how* force may (and may not) be used. On both, but especially the latter, Europeans adhere more strictly to the law. Therein lies a problem for coalition operations that is also under-acknowledged.

As a general rule, the UN Charter prohibits states from using, or threatening to use, military force against another state or civilians except under specific, restricted circumstances. This is a peremptory norm of international law from which there are no derogations. However, there are two exceptions to this rule — namely, use of force in self-defence and the UNSC authorising the use of force to restore international peace and security.⁷ Some states, especially the United States and Israel, take an expansive view of what qualifies self-defence, to include use of force to prevent a threat from emerging. Use of force to *pre-empt* an *imminent* attack may be legal under customary international law. Few states, though, recognize the legality of *preventive* use of force where a threat is not imminent. As

a superpower, the United States has felt it necessary to use force on a number of occasions since 1945 to protect its interests and thereby, as US policymakers see it, global security.

In using force to protect global interests and prevent threats from materializing, the United States is not simply pursuing a “might makes right” approach. Rather, the United States and European states have different philosophical approaches to international law. European states generally take a positivist approach, rooted in the work of English and German scholars of the mid-19th to mid-20th centuries, which sees law as a set of rules agreed by states in agreements and customary practice. They consider states bound by these rules, regardless of the ethics of the situation. In other words, for legal positivism, international law is not about advancing moral outcomes in world politics but simply regulating state interaction. This view was challenged by Liberal theorists in mid-20th century America, in the context of an emerging Cold War struggle to promote democracy and contain and defeat Communism. The legacy of this is a Liberal approach to international law, where US policymakers seek to interpret and stretch the law so that it may be used to advance Liberal values. To be sure, necessity born of global interests and responsibilities gives the United States reason enough to be creative with the law.⁸ But the point is that this creativity is rooted in a Liberal approach that seeks to make law serve specific moral ends.⁹

The political force in Europe that espouses a legal prohibition on use of force appears to have grown with the end of the Cold War. This is not to say that European states are entirely bound by international law on use of force. In NATO’s 1999 Kosovo War, European states used force without lawful right. However, the 2003 Iraq War appears to have hardened European opinion on the necessity of legal grounds for the use of force. Notably, France and Germany were strong opponents of the US-led invasion, mostly on political grounds, but they used law as the framework through which to argue their case with the United States. Perhaps less appreciated is the impact of this war on British political opinion. The debate in Britain mostly revolved around the legality of the war, rather than the military necessity of it. In deciding to support an illegal war by the United States — which is how it was viewed by most Britons and, crucially, the British Labour Party — then-Prime Minister Tony Blair effectively committed political suicide. This episode may be expected to throw a long shadow over British politics for years to come. Indeed, we see it already in the great lengths to which the current British coalition government has gone to establish the legal basis of NATO’s on-going air campaign in Libya.

An even more pronounced transatlantic legal gap exists on international law regulating the conduct of warfare, i.e., the Law of Armed Conflict (LOAC). Here, too, US military forces view themselves as less constrained than their European counterparts. Two areas are worth highlighting. The first is targeting. In modern war, many targets — such as transportation, communications, and power infrastructure — serve both civilian and military uses. This is particularly so in small wars where the opponents include non-state actors. European states are bound by the 1971 Additional Protocols of the Geneva Conventions, which clarify the law on dual-use targets in a way that restricts when force may be directed against them. The United States is not a signatory of the 1977 Additional Protocols and, accordingly, adopts a more expansive interpretation of the law on attacking dual-use targets. Hence, when NATO sought to redouble the pressure on Serbia in the Kosovo War by extending its air campaign to dual-use targets in and around the Belgrade capital, European air forces were unable to execute most of the target packages based on their international legal commitments.

The second area in the LOAC is the impact of European and domestic law on military operations. Incredible as it may sound to American ears, the European Convention on Human Rights (ECHR) has a direct impact on how European militaries fight. The ECHR creates a high bar for European

militaries in terms of their duty to care for service personnel. Obviously, allowances are made for conventional war but less so for counterinsurgency campaigns and other asymmetric conflicts. Even more profoundly, the ECHR creates obligations for European militaries with respect to how they treat civilians, and especially detainees, in such campaigns. The ECHR reinforces and exceeds the obligations under the LOAC, giving foreign affected civilians the right to pursue legal action in Europe against offending European militaries.

European militaries may face additional restrictions under domestic law in how they conduct operations. This may be clearly seen in the case of Britain. In operations outside of war, British forces may only use force in self-defence. Up to the mid-2000s, this severely hindered British forces in Afghanistan and Iraq; for instance, insurgents could not be targeted unless they were armed *and* presented an immediate threat. Moreover, British military authorities are required to investigate lethal use of force outside of war and report any irregularities to the Crown Prosecution Service (CPS) for possible prosecution under British criminal law. The realities of combat operations have led British legal advisors to reinterpret the law to permit the targeting of, for instance, insurgent spotters (what British soldiers call “dickers”). But, still today, in escalation of force incidents resulting in civilian deaths, British troops face the ever-present risk that the CPS may prosecute.

Implications for *TSC*

Tomorrow's Security Challenges presents a world of trouble for the United States in the near future, or more precisely four worlds each with their own sets of threats. Consistent cooperation between allies has demonstrated that America need not face these dangers alone. The West contains a Fighting Core of states from which America can fashion military coalitions. In some cases, NATO itself may act, possibly even without UNSC authorisation, as it did in Kosovo in 1999. This would provide a powerful legitimacy boost to any US-led military campaign, but it would undoubtedly come at some cost to unity of command and effort. Alternatively, a coalition of states from the Fighting Core may join a US-led campaign, offering less by way of legitimacy but better unity of command and effort.

It is a brave, or foolhardy, social scientist who would predict the future. But in the spirit of *TSC*, we may roughly sketch out the prospects for US-led coalition warfare in each of the four futures presented in the *TSC*. I shall do so along three parameters: 1) The probability of war generating the requirement for a Western coalition, 2) the likely supply of coalition partners from the Western Fighting Core, and 3) the likely effectiveness of western coalitions in terms of legitimacy and military capabilities.

The Concert of Powers scenario is the most benign future for the United States out to 2025. On the whole, the international community works effectively through various multilateral institutions and channels to deal with the major security challenges facing the world. The probability of war is low, and the US military will be mostly conducting operations other than war. Ironically while the demand for coalition partners may be low, the supply is likely to be high given the mood of multilateralism and the limited risk of actual fighting. The prospects for US-led military coalitions are reasonably good in this scenario. Indeed, most US military operations are likely to occur in partnership with allies, especially NATO allies. There will be a degree of disunity of effort but this may be accommodated without too much trouble given the relatively low tempo and risk in operations other than war.

Table 3. Future prospects for US-led coalition warfare

<i>Future World Scenario</i>	<i>Probability of War</i>	<i>Coalition Supply</i>	<i>Coalition Effectiveness</i>
Concert of powers	Low	High	Medium
Fragmented international system	Medium	Low	Low
Rise of non-state networks	Medium	Medium	High
Great-power confrontations	High	Low to medium	Low to high

The *Fragmented International System* scenario is the most worrying future, because it is the most plausible of the four. This sees a world where Western power is diffused into regional blocs, and international consensus breaks down on how to deal with major security challenges. Here, the probability of war is medium, with relative decline of US power creating instability in the Middle East and with nuclear proliferation creating pressure for preventive military action. Ironically, and unfortunately, the supply of coalition partners is likely to be low in such a world. The NATO partners are unlikely to be able to agree sufficiently to commit the Alliance to war. The UNSC is also likely to be deadlocked, and in the absence of an authorising UNSC resolution, this will create a further obstacle to European participation in any US-led war. The United States should still be able to drum up a small coalition from within the Fighting Core, namely Britain and a couple of others. However, with few partners, the coalition would have limited effectiveness in terms of providing legitimacy and even resources to the campaign.¹⁰

The Rise of Non-State Networks is a future where America faces a myriad of security challenges associated with the decline of states, rise of violent extremism, and an increase in transnational terrorism and crime. In this future, US forces must concentrate on counterterrorism (CT) and irregular warfare. There is a medium probability of war of the kind the United States is waging in Afghanistan — not large-scale conventional warfare, but large-scale counterinsurgency warfare. The supply of coalition partners will also be medium. The pool of coalition partners will be large in an Afghan-type scenario, where the war is clearly just and legal. The pool will be smaller in an Iraq-type scenario, where the legality and legitimacy of the war are open to question. The effectiveness of military coalitions will be high because the Fighting Core, especially tier 1 and 2 states, will bring military capabilities optimised for CT and irregular warfare.

The *Return of Great Power Confrontations* is the most alarmist but, fortunately, least plausible future world for America. It forecasts a general shift in power from West to East (this trend is plausible enough), and increased competition between status quo and revisionist powers over “resources, markets, and influence.” This future has all the nightmare scenarios lumped together: The rise of China, a resurgent Russia, and energy insecurity. *TSC* suggests that all-out major conventional war is

still unlikely in this future, but it foresees a return to pre-1914 style arms races and military confrontations between the United States and the rising powers. Most students of military history will agree that arms races coupled with multiple military confrontations lead to a high probability for conventional war. The supply of coalition partners in this future scenario will be low to medium: Low if the main challenge comes from China, because Europeans tend to view this threat differently than the United States; medium if the primary threat comes from a resurgent Russia or access to energy supplies. Some Europeans would plausibly support a war triggered by either threat, but other European states, especially Germany, would still favor non-military responses. Under this scenario, the effectiveness of military coalitions will be low to high. It will be low if the supply of coalition partners is low, impacting on the legitimacy uplift. Of course, in an era of great-power competition, low legitimacy is to be expected and hence more tolerable. In terms of military capabilities, a small coalition could have medium to high effectiveness at protecting access to the global commons or containing a rising China, because Europeans have relatively strong naval forces. Effectiveness will be high both in terms of legitimacy and military capabilities in the case of a large coalition/NATO military response to aggression from a resurgent Russia.

Conclusions

It is not too much of a stretch to say that military coalitions are the new norm for Western warfare. This paper has drawn out the distinction between formal alliances (focusing on NATO) and ad-hoc coalitions to explore the political legitimacy versus military capability benefits and constraints of military coalitions. In reality, future US-led coalitions may come in all shapes and sizes. Indeed, by identifying three tiers of military partners, the implication is that the Fighting Core from within NATO may form its own ad-hoc coalition, thus offering a legitimacy and capability uplift. Obviously, there are also other alliance and coalition partners outside of NATO that are important to the United States, including the African Union, Gulf Cooperation Council, and Association of Southeast Asian Nations. Depending on the location and nature of a particular future conflict, one of these alliances may provide more of a legitimacy uplift than NATO. Indeed, for the United States, the support of the Arab League was crucial in launching the air campaign against Libya, though, interestingly, the United States handed over control of the campaign to NATO about a week later in order to deflect criticisms from the Arab League about the scale of the bombings against Mu'ammarr Qadhiffi's forces.

Regardless of which future, and whatever form and configuration of military coalition, any US wartime partnership with the Europeans will suffer from capability gaps in technology, strategy, and law. These gaps do not damn future coalitions; US strategists and policymakers simply need to be alert to them and take remedial action. Here again, Afghanistan shows the way. Coalition contingents may be parcelled out to areas and missions in the theatre of operations, depending on military capabilities and national caveats. Even within national areas of operation, contingents with limited operational capabilities due to military or political constraints may be augmented with more robust US units. Hence, the Italian and Spanish campaign in Regional Command (RC)-West and the German-led campaign in Regional Command-North, depend on air and combat support from US task forces that are dedicated to each of these RCs. This blending of US and European forces offers a useful model for dealing with the legal capability gap, in particular. Of course, the technology gap may create some problems in terms of multinational operations within these blended force constructs. Finally, Afghanistan also underlines the imperative for US leadership to overcome the

strategy gap and to impose unity of command on coalitions, thereby ensuring unity of effort in the campaign.

1 Jeremy Pressman, *Warring Friends: Alliance Restraint in International Politics* (Cornell University Press, 2008)

2 I do not want to overdraw the distinction between NATO and ad hoc coalitions. NATO is able to exercise unity of effort, especially around a core of war-fighting states, as we have seen in Afghanistan since late 2009.

3 Terry Terriff, Frans Osinga, and Theo Farrell, eds., *A Transformation Gap? American Innovations and European Military Change* (Stanford University Press, 2010).

4 Theo Farrell and Sten Rynning, 'NATO's Transformation Gaps: Transatlantic Differences and the War in Afghanistan,' *Journal of Strategic Studies*, vol. 33, no. 5 (2010), pp. 673-700.

5 Sierra Leone is an exception, with Britain stepping in to rescue a failing UN peacekeeping missions, and deploying a sufficiently capable naval and ground task force for the mission.

6 David Betz and Anthony Cormack, 'Iraq, Afghanistan and British Strategy,' *Orbis*, vol. 53, no. 2 (2009), pp. 319-336; Hew Strachan, 'The Strategy Gap in British Defence Policy,' *Survival: Global Politics and Strategy*, vol. 51, no. 4 (2009), pp. 49-70; Paul Newton, Paul Colley and Andrew Sharpe, 'Reclaiming the Art of British Strategic Thinking,' *RUSI Journal*, vol. 155, no. 1 (2010).

7 Since the 1990s, the UNSC has authorised the use of force in response to a number of humanitarian crises that it judged were threats to international peace and security. However, most states refuse to recognise humanitarian intervention in itself as a lawful exception to the prohibition on the use of force.

8 Moreover, the US constitution does not recognise the superiority of international law, which is most unusual; for most states, international law trumps domestic law.

9 David Armstrong, Theo Farrell and Helene Lambert, *International Law and International Relations* (Cambridge University Press, 2007), chapters 3 and 9.

10 Of course, legitimacy in the exercise of military power may become less important in a fragmented international system, as discord and disagreement will characterise the international politics of this future.

8. The Mystique of “Cyberwar” and the Strategic Latency of Networked Social Movements

David Betz

Cyberspace has come a long way since the science-fiction writer William Gibson coined the term in his 1982 short story, ‘Burning Chrome’. Of his creation, Gibson later said, ‘it seemed like an effective buzzword ... evocative and essentially meaningless. It was suggestive but had no real semantic meaning, even for me.’¹ Few now could doubt the effectiveness of cyberspace as a buzzword. Many happy research grant holders can attest to the near-magical powers the cyber-prefix has over funding agencies. It is evocative, to be sure, but what does it actually mean for strategists concerned with the balancing of ends, ways, and means in conflict today? How useful is it for understanding global trends and the future of warfare?

History can tell us two things about the past, which may help us understand the present. First, the essential strategic dilemma today is not merely adaptation to technical change—the advent of the ‘Information Age’, though this is important; rather it is the same diminishing decisiveness of major war, for a mixture of political, economic *and* technological reasons, that has vexed generations of strategists, not merely our own. Second, contemporary strategists who reckon, for reasons including the technical difficulties of attribution in cyberspace, that ‘cyberwar’ is a decisive new form of conflict are wrong. Meanwhile, social science can tell us something about new power actors emerging in transnational space that strategists need to comprehend better, because digital connectivity is imbuing novel globally networked social movements—some egregiously violent and politically-orientated, others instrumentally-violent and profit-oriented, most politically-oriented and non- (or trivially) violent—with a strategic significance not seen by non-state actors in the Western world since 1648.

Before we begin, a caveat and a few words of context are necessary. First, on the whole, in this paper I adopt the self-conscious tone of the historian ever sensitive to the continuity of events as opposed to their change. Having said that, though, I also believe that we are as a species *near to* a genuine discontinuity, which some scientists have described as ‘The Singularity’—the point at which human intelligence is surpassed by machine intelligence.² Afterwards, whether we merge with our digital offspring, are massacred by them, or kept as reverend ancestors, or much-loved pets, there is no point speculating about war (or anything else); until then, however, war will remain as it ever was—an act of force to compel our enemy to do our will, if you prefer Clausewitz, or the collective action of a group of men to realize their own will even against the resistance of another group, if you prefer Weber.³

Second, no one would deny the awesome opportunities for business, governments, and citizens that the unparalleled advancement of digital interconnectivity in recent decades has brought with it—cyberspace penetrates nearly every aspect of our lives, how we work, entertain ourselves, consume, maintain friendships, find spiritual sustenance, educate ourselves, and participate in civic life as free citizens. Indeed, so deep and multi-layered is the interpenetration of the ‘real world’ by the ‘digital world’ that it is increasingly nonsensical to speak of the two as distinct and separate. Clay Shirky puts it this way, ‘The old view of online as a separate space, cyberspace apart from the real world... the whole notion of cyberspace is fading. [Cyberspace is not] an alternative to real life, [it is] part of it.’⁴

As individuals we inhabit both worlds simultaneously, and the same is true for governments, industries, and practically every other collective social entity. Truly, 'The Matrix is everywhere.'

Naturally, there is an anxiety surrounding the concept of cyberspace, which is predictable. In the late 1960s Marshall McLuhan, drawing on Søren Kierkegaard's 1844 book *The Concept of Dread*, observed that 'wherever a new environment goes around an old one there is always new terror.'⁵ It is not hard to find evidence today of a 'new terror'. It is splashed across the pages of newspapers and the covers of popular books where all manner of cyber-prefixed threats from 'cyberespionage' and 'cyberterror' to 'cyberwar' and even 'cybergeddon' are proclaimed; and these in turn engender other cyber-prefixed neologisms such as 'cybersecurity', 'cyberpower' and 'cyberstrategy' in response. It is also to be found in the stated strategic apprehensions of many major governments. The title and foreword of Britain's new National Security Strategy, *A Strong Britain in an Age of Uncertainty*, provides a perfect example of this:

Britain today is both more secure and more vulnerable than in most of her long history. More secure, in the sense that we do not currently face, as we have so often in our past, a conventional threat of attack on our territory by a hostile power. But more vulnerable, because we are one of the most open societies, in a world that is more networked than ever before.⁶

Britain is not peculiarly subject to this paradox of conventional physical security being matched by a sense of unconventional insecurity—the same sentiment pervades American strategic writings such as the latest *Quadrennial Defense Review* and, no doubt, the governments of most other major countries.⁷ Networked societies now perceive that they face threats which previous societal forms did not, including the vulnerability of critical national infrastructures to cyberattack, the potential enervation of their economies through cyberespionage and cybercrime, and the consequent endangerment of the lives, property, and well-being of their citizens. McLuhan was essentially correct: whatever the technology in question, eventually the 'shock of the new' tends, in time, to be absorbed and normalized. This is not to deny the transformative effects of technology, but it is important, as strategists, to maintain a degree of perspective on events and processes that at close hand appear as existential threats yet with respectful distance and consideration take on different hues.

Some Things Change, Some Stay the Same

If you want to understand what is happening in 2011 it is worth pausing for thought about the world as it seemed in 1911 because there is more than a passing resemblance between the first parts of the 20th and 21st centuries. There is today a similar technological surge—the 19th was known as the century of invention for good reason; a similarly political revolutionary climate prevails in which *les anciens régimes* are the target of substantial subversion and political violence; and there is a similar popular feeling that the international order is shifting in some potentially tectonic way.

The present is always shaped by many forces, often deep historical processes—political, social, economic, demographic, climatic and so on—but there can be little doubt that this particular moment is powerfully affected by a recent and radical change in the modality of communications which many regard as the dawning of an 'Information Age'. 'The Web is shifting power in ways that we could never have imagined', claimed a recent BBC television documentary on cyberspace called *The Virtual Revolution*:

With two billion people online the Web is holding governments to account, uncovering injustices, and accelerating globalisation. It's providing us with new allegiances but it's also reinventing warfare.⁸

Leave aside for the time being whether or not this is true and consider where have we heard such claims before, particularly in respect to changes in warfare? In fact, they were wearily typical of the airpower theorists in Europe and the United States in the first decades of the 20th century. As Michael Sherry commented on early speculations about the 'age of flight' in his masterful history *The Rise of American Air Power*,

Because prophecy necessarily leaped ahead of technology, it often read like fanciful or bloodless abstractions, as if designed, like science fiction, less to depict future dangers than to express current anxieties.⁹

The bomber will always get through...', warned Stanley Baldwin in a famous House of Commons speech in November 1932 entitled 'A Fear for the Future'.¹⁰ The prophets of airpower writing in the shadow of the Great War's ghastly yet indecisive slaughters were convinced of the power of aerial warfare to deliver big results fast. In one of his worst books, *The Reformation of War*, published in 1923, the British strategist J.F.C. Fuller invited his readers to...

Picture if you can what the result [of a mass aerial attack] will be: London for several days will be one vast raving Bedlam, the hospitals will be stormed, traffic will cease, the homeless will shriek for help, the city will be in pandemonium. What of the government at Westminster? It will be swept away by an avalanche of terror. Then will the enemy dictate his terms, which will be grasped at like a straw by a drowning man. Thus may a war be fought in forty-eight hours and the losses of the winning side may be actually nil!¹¹

It was not merely the apparent puissance of the new means of warfare that anchored the beliefs of airpower theorists in its decisiveness; equally important was their acute sense of the fragility of modern industrial society. In the 1920s and 1930s there was profound worry in Europe that the economic achievements in which they gloried—industrial power and material and cultural wealth—also made them hopelessly vulnerable to attack on the home front. Consider the language of another British strategist Basil Liddell-Hart, also writing in the 1920s about the power of aerial bombardment to leap over a country's surface fortifications and attack its innards directly:

A nation's nerve system, no longer covered by the flesh of its troops is now laid bare to attack, and, like the human nerves, the progress of civilization has rendered it far more sensitive than in earlier and more primitive times.¹²

This is not to beg the question that bombs and bandwidth are the same or equivalent things, or that what was true or not true of airpower need necessarily be the same of its cyberspace analogue. Yet there are some lessons that we might take from the debates over airpower in the early part of the previous century. Perhaps the most germane of these is the fact that airpower never lived up to the dreams of its most enthusiastic boosters. There certainly is no denying the enormous contribution of it to modern warfare; but what never materialized was the ability to achieve *independent* war-winning effects—winning the war in forty-eight hours without casualties on the victorious side, as Fuller imagined, and as other prophets of airpower claimed too.

Another lesson is to be cautious of experts in epaulettes whose vision may be more clouded by internal bureaucratic positioning than 'non-expert' outsiders. For instance, in 1908 the science

fiction author H.G. Wells painted in his book *The War in the Air* a picture of the effects of airpower on war, which was essentially ambivalent if not dystopian. He got much of the detail wrong, often comically so—his war in the air was fought by vast fleets of Zeppelins, ground-based lightning cannons, and ‘Asiatic’ flying machines propelled by flapping wings.¹³ More important though was that he got the big picture right: his conclusion, written just five years after the first flight of the Wright brothers at Kitty Hawk, was that aerial warfare would be ‘at once enormously destructive and entirely indecisive.’ Compare this with the musings of the ‘father of the USAF’ Billy Mitchell whose thoughts on airpower’s significance by 1930 were utterly unequivocal and distinctly utopian: it was ‘a distinct move for the betterment of civilization, because wars will be decided quickly and not drag on for years.’¹⁴ Whose vision was the clearer? Old adages of missing the forest for the trees should spring to mind.

Finally, we should bear in mind Eliot Cohen's sage observation that ‘air power is an unusually seductive form of military strength, in part because, like modern courtship, it appears to offer gratification without commitment.’¹⁵ The fundamental characteristics of airpower are said to be: speed—a function of the lack of obstacles in air space which makes airpower *highly responsive*; range—a function of the ubiquity of the atmosphere which means airpower is *highly mobile*; and, elevation—a function of the depth of the air space which means airpower possesses a *wide perspective* on the conflict below. Cyberpower appears to offer similar things, only more so, which makes it a very sexy concept indeed.

The Siren Song of the Cyber Prophets

In fact, cyberpower offers other things too which airpower does not: *anonymity*—a function of the architecture of cyberspace;¹⁶ and *low ‘buy-in costs’*—a function of the ubiquity of digital networks and the prevalence of cheap consumer electronics. These attributes alarm experts in epaulettes. They are the key factors that underpin most of the ‘cyber-doomsday’ or ‘electronic Pearl Harbour’ scenarios which, hyperbolic as they may be, are certainly rhetorically effective. Take, for instance, the conclusion to James Adams’ 1998 book *The Next World War*, one of the earliest popular treatments of cyberwar, ‘As David proved against Goliath, strength can be beaten. America today looks uncomfortably like Goliath, arrogant in its power, armed to the teeth, ignorant of its weakness.’¹⁷ Or as it was put in a recent article in *Joint Forces Quarterly*:

One reason for the imminent and broad-based nature of the cyberspace challenge is the low buy-in cost compared to the vastly more complex and expensive appurtenances of air and space warfare, along with the growing ability of present and prospective Lilliputian adversaries to generate what one expert called ‘catastrophic cascading effects’ through asymmetric operations against the American Gulliver.¹⁸

Pick your metaphor, Goliath and David or Gulliver and the Lilliputians, the point is that cyberspace is regarded as potentially very disruptive of the existing asymmetry of power between the United States and its state competitors. In Richard Clarke’s recent book *Cyberwar* he describes a cyberattack on the United States that is utterly devastating:

In all the wars America has fought, no nation has ever done this kind of damage to our cities. A sophisticated cyber war attack by one of several nation-states could do that today, in fifteen minutes, without a single terrorist or soldier ever appearing in this country.¹⁹

But then in a further twist he adds the kicker—because of the inherent identity-obscuring effect of the Web...

In cyber war, we may never even know what hit us. Indeed, it may give little solace to Americans shivering without power to know that the United States may be about to retaliate in kind.

'While you were on the line with the President, sir, Cyber Command called from Fort Meade. They think the attack came from Russia and they are ready to turn out the lights in Moscow, sir. Or maybe it was China, so they are ready to hit Beijing, if you want to do that. Sir?'²⁰

Indubitably, this is a scary scenario. However, is it not the same thing we observed with the prophets of airpower? Consider what Liddell-Hart said about the 'nervous system' of the country laid bare to attack then look at the apprehensions expressed in the *National Strategy to Secure Cyberspace* from 2003:

Our nation's critical infrastructures are composed of... [a very long list of assets beginning with 'public and private institutions' and ending with 'postal and shipping']. Cyberspace is their nervous system—the control system of our country.²¹

Of course it is possible that what was not true of airpower three quarters of a century ago may be true of cyberpower now; that said, again, reason would suggest some caution about the decisiveness of this new means, to which we shall return. First, however, it is important to point out that the 'attribution problem' is not simply a problem; in fact, viewed from another perspective, it is the veritable Holy Grail of strategic calculation because it *appears* to solve an underlying strategic problem which has been bothering us for years: how to restore elusive decision in major war. If the identity of an attacker via cyberspace is unknown then retaliation is difficult—and perhaps, therefore, the process of escalation inherent to war that has largely held back *major* war since 1945 might not be engaged. In short, cyberpower is even more seductive than airpower, in part because it appears to offer gratification without the need of any physical connection, let alone commitment, to other human beings whatsoever.

This is not to diminish the 'attribution problem', which is quite obviously exploited by hackers and criminals who, as it states in USAF doctrine on Cyberspace Operations, constantly 'amaze those in global law enforcement with the speed at which they stay one step ahead in the technology race.'²² It is to suggest that the attribution problem is really something which pertains to those activities, to law enforcement and to counter-espionage, because war is different. The false allure of 'cyberwar' lies in the notion that it provides a sneaky way to reassert decision in the context of major war. But when states use cyberpower against other states for the purposes of compelling them to do their will they still have to declare what it is (even if after the event). Anonymity is as much a problem for the strategic aggressor as it is the defender: how do you compel your enemy to do your will if you do not communicate it? To whom does the victim either submit or render 'cash payment', as Clausewitz put it?

There is no sneaky way around this problem. If China were to kill several thousands of Americans, or vice versa, and profoundly disrupt the lives of many millions of others through cyberattack in an attempt to bend its government to its will then the prefix cyber would be superfluous to the requirement of describing the state of relations which would exist between the two countries. 'Cyberwar' as a 'pure play' option for states is unrealistic because of the expanse and diversity of

their interests and capabilities. As strategists we should be demanding that our colleagues show more discipline in their use of the term 'war'.

What of the alleged 'low buy-in' costs of cyberwar? Recent events do not lend credence to this idea, at least for the time being. To be sure, the physical instruments of a cyberattack are dirt-cheap. The *Stuxnet* virus which targeted the Iranian nuclear program accomplished relatively cleanly what a large air force might have struggled to do messily, and it fit comfortably in a 'corner' of a twenty dollar data stick. According to the best recent reporting *Stuxnet* was designed by the United States and Israel with the assistance, witting or otherwise, of Britain and Germany. Much attention has been paid to the remarkable sophistication of the weapon. For the purposes at hand, however, the significant thing about *Stuxnet* (which in historical perspective may be seen as the Zeppelin bomber of its day) is that its design required a large amount of high-grade intelligence about its intended target in order to work. It was not, according to experts who have analysed it, the work of hackers alone:

It had to be the work of someone who knew his way around the specific quirks of the Siemens controllers and had an intimate understanding of exactly how the Iranians had designed their enrichment operations. In fact, the Americans and the Israelis had a pretty good idea.²³

In short, as with all other weapons systems (with the exception of the hydrogen bomb, arguably) it required the combination of significant other resources in order to achieve strategic effect. Moreover, far from demonstrating a smoothing of the existing asymmetry of power it actually shows a reinforcement of that asymmetry: cyberpower rewards already powerful states with even more capability and, when push comes to shove, it would appear that Western powers have thought hard about cyberattack and are pretty good at it.

Again, a comparison to airpower is apt. Virtually unchallenged air supremacy and air-ground coordination has become more or less the *sine qua non* of the Western 'way of war'; or what in his book *Military Power* Stephen Biddle described, in slightly different terms, as the 'modern system' of warfare—a system which, not incidentally, he claims was born in the tactical conditions of the First World War.²⁴ The advent of the 'modern system' caused a bifurcation of military power between armies that 'got it' and armies that did not—with the latter being soundly thrashed by the former even when they possessed the same, or similar, weapons and numerical superiority.

A similar process is likely with respect to cyberpower. Armies which are able to defend their networks will accrue distinct advantages from 'network-enabling' them, while armies that do not possess such ability will not enjoy any such advantage—and they will be punished harshly for trying to 'network-enable' practically anything. It is worth recalling that the seminal 1993 article by John Arquilla and David Ronfeldt, 'Cyberwar is Coming!' which set off this debate, in contrast with the extant literature on cyberwar, was essentially tactical in orientation:

Small numbers of your light, highly mobile forces defeat and compel the surrender of large masses of heavily armed, dug-in enemy forces, with little loss of life on either side. Your forces can do this because they are well prepared, make room for manoeuvre, concentrate their firepower rapidly in unexpected places, and have superior command, control, and information systems that are decentralized to allow tactical initiatives, yet provide the central commanders with unparalleled intelligence and 'top-sight' for strategic purposes.²⁵

It was a vision about moving and shooting more adroitly than your opponent through the employment of better information systems—knowledge as power in a very literal and immediate sense. Military cyberpower is a real and important compliment to other military capabilities—it does not, as airpower did not, obviate those capabilities or change the objective nature of war.

World of Warcraft

The last word on cyberpower could easily go to H.G. Wells, who described airpower with the very apposite phrase: ‘neither unthinkable nor blessed.’ Except actually that will not suffice, for while it is true that in military terms cyberspace changes less than is often supposed, there is actually something significant happening today as a result of digital connectivity of which strategists should take account—just not in the frame of interstate war. A few years ago the British general Rupert Smith wrote in his book *The Utility of Force*, that “...war as cognitively known to most non-combatants, war as battle in a field between men and machinery, war as a massive deciding event in a dispute in international affairs: such war no longer exists.”²⁶ Smith goes way out on a limb here, but he has quite a lot of company perched on the branch alongside him, including the likes of Martin Van Creveld, Michael Mandelbaum, and most famously Norman Angell who wrote 100 years ago in *The Great Illusion*,

...the believer in war justifies his dogmatism for the most part by an appeal to what he alleges is the one dominating fact of the situation—i.e., that human nature is unchanging. [but] Human nature is changing out of all recognition. Not only is man fighting less, but he is using all forms of physical compulsion less, and as a very natural result is losing those psychological attributes that go with the employment of physical force. And he is coming to employ physical force less because accumulated evidence is pushing him more and more to the conclusion that he can accomplish more easily that which he strives for by other means.²⁷

Angell was wrong then, as the two world wars that followed within a generation showed with tragic force (Smith may be wrong now). Nonetheless, the belief in major war’s obsolescence has proved extremely persistent and has many current adherents—including the preeminent historian of the First World War, Hew Strachan, who observed recently that ‘the pole around which our ideas of war cluster should no longer be major war, itself a theoretical construct derived from the Second World War and scarcely encountered in reality since.’²⁸ Moreover, the *ideal* of ‘war by other means’ which Adams claimed ‘cyberwar’ would bring has hardly lost its appeal for a minute since Sun Tzu immortalized it more than 2,500 years ago.

Let us assume for purposes of argument that the long sought ideal is now a reality. This raises a question: if the skein of human history is no longer spun so much from threads of khaki, olive green, and field grey then from what is it spun, for surely, contra Angell, it is not because we have become all of a sudden more agreeable and less disputatious as a species by nature? My answer: wizards and demons. It sounds funny but is meant only somewhat playfully; in fact, it is based upon standard projection of well-established technological and social trends which are causing the emergence of networked social movements with an increasing ability to cause large economic, political, and security effects.

Arthur C. Clarke, scientist, science fiction author and one of the most cautious and accurate futurists, offered three ‘laws’ of prediction. The third of these states ‘Any sufficiently advanced

technology is indistinguishable from magic.²⁹ Our society is utterly suffused with technology, especially information technology, which the vast majority of us use for all intents and purposes as if they were magical artefacts: people consult Google the way the Greeks did the Oracle of Delphi; they use the 'appear offline' setting on MSN Messenger to be invisible to other 'Netizens' in the same way Frodo Baggins used the One Ring; there is a long-running gag on the comedy programme *Little Britain* which rests on the finality of the phrase 'Computer says no' (usually voiced by an uncaring travel agent or petty bureaucrat) as though like the judgments of Solomon there was no higher authority in this world than the impersonal net.

There is scene in Daniel Suarez's novel *Freedom*TM, the sequel to *Daemon*—a near-future/alternate present depiction of a world in which a distributed, narrow artificial intelligence (the eponymous *Daemon*), created by a dying multi-billionaire computer game designer, radically reshapes society through manipulation of the network flows on which it depends, which illustrates this convergence of technology and magic perfectly.³⁰ In this scene the book's hero meets his 'spiritual guide,' who explains to him the workings of the 'darknet'—the system created by the *Daemon*, which blends both the virtual and the 'real' worlds—and the quest on which he has been set:

Where ancient people believed in gods and devils that listened to their pleas and curses—in this age immortal entities hear us. Call them bots or spirits; there is no functional difference now. They surround us and through them word-forms become an unlock code that can trigger a blessing or a curse. Mankind created systems whose inter-reactions we could not fully understand, and the spirits we have gathered have escaped from them into the land where they walk the earth—or the GPS grid, whichever you prefer. The spirit world overlaps the real one now, and our lives will never be the same.³¹

Aside from the use of the words 'spirit world' instead of 'cyberspace' is there any difference between Suarez's notion that 'the spirit world overlaps the real one' and Clay Shirky's argument that the distinction between cyberspace and the real world is fading to irrelevance? Given Gibson's acknowledgement of the semantic emptiness of the term cyberspace why should we be precious about it? The truth is that relatively few people understand how our new hybrid reality of 'real' space and cyberspace is constructed—they do not see the 'Matrix' in its raw code. In itself, this is a bland observation; the elite in all societal forms throughout history has always been composed in part by those who, in Marxist terms, were most *au fait* with the 'dominant means of production':

Technology does not invent, install, or maintain itself, but needs human beings to bring it out into production. It is thus not the technology that matters but the human skill and social organization that lie behind it. In other words, it is the professional experts who have constructed the system, which in turn has created them.³²

It leads to an important question, however, which is that if cyberspace is generating a new social morphology in the form of the 'network society' then what is the nature of the new elite? Presumably a part of it will be composed of those with greater than normal ability to delve between the layers of hardware and software from which the 'physical' and 'syntactic' layers of cyberspace are constructed.³³ In the early 1970s Daniel Bell in *The Coming of Post-Industrial Society* predicted something like this when he wrote of the emergence of 'technical elites'.³⁴ We could as well call them wizards—magic adepts, not magic in the sense of sleight of hand, but magic in the sense of being able to cause real world change through what seems to the non-adept as the casting of spells and invocations issued in arcane languages.

From a security perspective, however, whatever we call the new elite, it must be recognized that it includes hackers. This is important for as Tim Jordan pointed out in his 1999 book *Cyberpower*:

Hackers are some of the most dedicated and powerful inhabitants of cyberspace and their ability to act in cyberspace is defined almost entirely by their expertise. There are numerous examples of hackers using astonishingly outdated equipment to control the most powerful resources of cyberspace. After all, telecommunications does not need a powerful computer and a simple machine can control a powerful one. Hackers demonstrate the extreme end of the technopower elite, where material resources are close to zero, though never actually zero, and expertise is monumental.³⁵

In other words, hackers are a superb example of the phenomenon which software entrepreneur cum strategist John Robb describes as 'super-empowerment'.³⁶ However, we must be wary of generalization about them. The term 'hacker' itself is contested and has transformed over time from a term of respect to one more often of opprobrium; and the hacker community is populated by multitudinous subgroups that vary in aim, motivation, and profile. Sociological profiles of the hacking community are few and far between and inherently hard to keep up to date owing in part to its amorphousness, ambiguous legality, and predilection to identity-obscuring *noms de guerre*. Hackers are typically positioned in terms of male youth culture, disaffection, and rebelliousness, though this is more a stereotype of one segment of the community than a valid generalization of the community as a whole. One way of typologizing hackers is to adopt an evolutionary model with different 'animals' branching off a common ancestor:

- 1st evolution (from 1960s–70s): creative programmers usually working in academic institutions on mainframe computers, ethical computer 'gurus', e.g., MIT/Stanford;
- 2nd evolution (from 1970s–80s): computer entrepreneurs involved in the shift from mainframe to personal computing, founding major computer companies and digital communities, e.g., Apple, The WELL;
- 3rd evolution (from 1990s): copyright breakers using the web for file sharing largely for entertainment rather than profit, e.g., Napster, Pirate Bay, etc;
- 4th evolution (from 1990s): criminals and 'cyberpunks' hacking for profit or 'cyber-vandalism' done for 'lulz' (fun).

An important trend extracted from this typology is that hacking has become more *objectively* purposeful over time. The first evolution of hackers appears to have been interested in programming mainly for its own sake—their main preoccupation was to achieve total mastery of their machines, which were very limited devices, and to produce elegant code. Their milieu was largely academic and scientific—a small community of highly intelligent people trying to get the most out of relatively dumb machines. Subsequent evolutions of hackers appear, while not necessarily losing a love of good code, to be more interested in computing for profit (legitimate or otherwise) or fun (harmless or not). Another trend is the decrease in *average* skill level as the community has burgeoned with 'script kiddies' hacking with sophisticated software written by more technically-skilled others. Ultimately, their milieu is more broadly societal and mainstream—a large group of relatively unskilled people entertaining or enriching themselves with ever more powerful machines and sophisticated software.

These trends are suggestive. Might the next evolution be hacking for politically subversive or revolutionary purpose? Does cyberspace create a 'niche' in the strategic realm that has not existed

before for spatially disaggregated, materially weak, but high-expertise actors (groups, possibly individuals, and plausibly the software alone) to exert strategic effect? Perhaps, as with Wells' *War in the Air*, science fiction has something to tell us. Suarez's novels are a good place to start. Certainly, they are 'ripping yarns' full of cinematic touches such as robotic samurai-sword wielding motorcycles, and the plot unfolds in a sequence of ever larger and more violent car crashes. But they are more than that too. For one thing, the *Daemon* behaves in a strategically sound manner as a true Clausewitzian bent on compelling its powerful enemies—corporations and powerful financiers primarily, government agencies secondarily—to do its will through an admixture of means, including force applied by its various agents, both human and robotic. For another, there are no grossly implausible details in the technology described. As the author put it,

The *Daemon* is, of course, fiction, but our world is increasingly automated, interconnected, and data-driven. Narrow artificial intelligence bots already make life-changing decisions about and for large segments of the human population... These proprietary systems alter human behaviour as we strive to improve or maintain our scores within their framework—in much the same way players are driven to reach higher levels in games... As long as they are profitable, these systems eventually become institutions unto themselves, attended by a caste of high-tech priests who alone know their dark mysteries.³⁷

Moreover, the books' appeal goes beyond those interested in mere techno-thrills. Indeed, the books can be read less as thrillers than as extended essays on sustainable economy, 'eco-pragmatism', and a new form of politics based upon massively parallel activism—punctuated by the occasional fiery car crash. In them the power of the network is normatively neutral while having the potential to be oppressive or liberating—neither 'unthinkable or blessed' as H.G. Wells might have said, and the 'wizards' with the technical nous to exploit it can do so constructively or parasitically. In other words, the *Daemon* is not a true artificial intelligence; it does not possess the wherewithal to care one way or the other what humanity does with its new power—heaven or hell, the choice is ours. The point here is not whether Suarez's imaginings are correct in detail—surely they are not; but whether, like Wells, he is capturing the big picture in ways that strategists should take on board. Considered from the perspective of ends, ways and means there is some 'real world' evidence, as yet tentative and easy to underestimate, that they should.

For example, the Internet collective known as 'Anonymous', which has received a lot of attention in the press in the last half year, is tempting to dismiss because of the almost self-parodying rhetoric it employs and the capriciousness of its target selection. In the space of two years it 'declared war' on, *inter alia*: the music industry and its legal representatives for cracking down on file-sharing, i.e., theft of intellectual property; followed by the Church of Scientology 'for the good of mankind and for our enjoyment'; the financial enterprises Visa, Mastercard, and PayPal, plus the governments of the United Kingdom and the United States, in order to punish them for the crackdown on Wikileaks and the persecution of its founder Julian Assange; as well as various regimes in the Middle East for being repressive. 'Anonymous' describes itself as:

...not a single person, but rather, [it] represents the collective whole of the Internet. As individuals, they can be intelligent, rational, emotional and empathetic. As a mass, a group, they are devoid of humanity and mercy. Never before in the history of humanity has there once been such a morass, a terrible network of the peer-pressure that forces people to become one, become evil. Welcome to the soulless mass of blunt immorality known only as the Internet.³⁸

The nature of Anonymous' leadership, if indeed it has any, is very unclear. There is no credible research done on its organization and structure; and the credibility of the few figures who have identified themselves as leadership figures—such as Barrett Brown, who claims to be a 'senior strategist and propagandist'—is difficult to judge.³⁹ Nonetheless, its highly successful (and on-going) attack on the reputable data security and malware response company HBGary demonstrated that it has substantial technical capability to cause harm—that is to say, it has *means* to compel its enemies. The firm was targeted after the CEO of an associated company HBGary Federal, Aaron Barr, announced that his company had infiltrated Anonymous, discovered its members' real names and was going to publicize them. In return, Anonymous hacked HBGary's servers, defaced its website, downloaded tens of thousands of its corporate emails and posted them on the web, digitally harassed its CEO and other staff, and left a threatening note in its booth at the RSA security conference in San Francisco, which caused the cancellation of the launch announcement of a major new software product. As the Vice President Jim Butterworth put it, "They decided to follow us to a public place where we were to do business and make a public mockery of our company."⁴⁰

The last exchange between HBGary's CEO Greg Hoglund on Anonymous' IRC channel in which he pleaded in vain for his e-mails to stay private lends some credence to the group's claim for 'blunt immorality' and absence of mercy:

```
<+greg> so you got my email spool too then
...
<@`k> greg we got everything
<+Agamemnon> Greg, I'm curious to know if you understand what we are
about? Do you understand why we do what we do?
<+greg> you realize that releasing my email spool will cause millions in
damages to HBGary?
...
<+Agamemnon> yes we do greg
<@`k> greg is will be end of you :) and your company41
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Moreover, there is unmistakable evidence of a plethora of *ways* in which enemies may be attacked ranging from acts of subversion (e.g., propaganda, data theft, website defacement) and sabotage (e.g., denial of service, systems disruption, data loss) through to *physical violence*. It is true that thus far we have seen no instances of 'cyber-terror'; 'virtual' groups like Anonymous have confined their activities to the virtual dimension. However, there are multiple examples of 'real world' social movements cottoning on to the power of networks to multiply their violent capacity for strategic effect. Al Qaeda, as has been richly described in the literature, is a superb example, having turned itself into what Mark Duffield has called a 'non-territorial network enterprise', which works in, through, and out of borderless, distance-killing cyberspace.⁴²

A key strength of al Qaeda is that the extremist community from which it draws energy lives and acts largely on the virtual plane; it has no territory but stretches around the world in geographically-isolated but digitally interconnected groups which share a common cause driven by a shared sense of outrage. As John Mackinlay put it, 'In these wispy, informal patterns, without territory and without formal command structures, they are not easily touched by the kinetic blows of a formal military campaign.'⁴³ Naturally, the literature has dwelled lengthily on al Qaeda and its affiliates and imitators because of the spectacular violence that they employ. Violence, however, is not the be all and end all

of the ability to coerce, particularly as we invest more and more value in our digital identities, threats to them become more potentially compelling. For instance, given a choice between a hard physical beating or the electronic assault he actually suffered, might HBGary's CEO have gone for the former?

The focus on al Qaeda perhaps obscures the larger phenomenon of which it is but one manifestation. In point of fact, there are many other networked social movements which use some or all of the same methods as al Qaeda—notably resource mobilization via propaganda and propaganda by deed, 'flattened' hierarchy, decentralization, and self-organization—which all depend on networks. Some of these networked movements, such as the environmental group Earth Liberation Front, use violence, though not yet on the scale or of the same viciousness as al Qaeda, and are similarly intent on destroying Western civilization which they regard as inimically hostile and destructive of the Earth's environment. Many others use networks to enhance their ability to organize various forms of protest including demonstrations that may end, deliberately or accidentally, in violent street battles. A good example is the anti-capitalist movement/umbrella group 'We are Everywhere' which describes itself as,

... the rise of an unprecedented global rebellion—a rebellion which is in constant flux, which swaps ideas and tactics across oceans, shares strategies between cultures and continents, gathers in swarms and dissolves, only to swarm again elsewhere. But this is a movement of untold stories, for those from below are not those who get to write history, even though we are the ones making it.⁴⁴

Thus, the question when it comes to such groups is not so much the *ways* and *means* by which they may behave as strategic actors, because these are already fairly clear and the trend of their likely developments is predictable; rather it is the *ends* to which their ways and means are or may be committed that are less clear and more worrisome. Again, it is worth starting with al Qaeda, about which there is relatively quite a lot known. The paradox of al Qaeda is its pairing of 21st century *ways* and *means* with a backward-looking *end* of restoring a 7th century Muslim empire, which fails to appeal to most Muslims who are interested in a very different promised land (as may be seen by the current 'democratic' revolutions in the Middle East) than the one with which Islamist ideologues try to tempt them. Similar in form, the Earth Liberation Front is a leaderless or quasi-leaderless movement that lacks central authority over its component cells, which act locally on their own initiative in accordance with the group's overall aims. As a result the group requires a powerful and encompassing strategic narrative in order to mobilize adherents and guide them to actions that are strategically purposeful. And as with al Qaeda, the group's ideology is not of its own making; rather it is a syncretic mix of beliefs formulated by more articulate others, including 'Deep Ecology', 'Social Ecology', and 'Green Anarchism' with an admixture of Neo-Pagan mysticism and anti-capitalism.⁴⁵

Moreover, the language they employ is startlingly familiar in its rhetorical structure to readers of Islamist rationalizations of their attacks. Consider, for example, this 11 August 2002 communiqué issued in response to the development of genetically modified organisms by several major corporations and universities:

Their blatant disregard for the sanctity of life and its perfect Natural balance, indifference to strong public opposition, and the irrevocable acts of extreme violence they perpetrate against the Earth daily are all inexcusable, and will not be tolerated. IF they persist in their crimes against life, they will be met with maximum retaliation.

In pursuance of justice, freedom, and equal consideration for all innocent life across the board, segments of this global revolutionary movement are no longer limiting their revolutionary potential by adhering to a flawed, inconsistent 'non-violent' ideology. While innocent life will never be harmed in any action we must undertake, where it is necessary, we will no longer hesitate to pick up the gun to implement justice, and provide the needed protection for our planet that decades of legal battles, pleading, protest, and economic sabotage have failed so drastically to achieve.

The diverse efforts of this revolutionary force cannot be contained, and will only continue to intensify as we are brought face to face with the oppressor in inevitable, violent confrontation. We will stand up and fight for our lives against this iniquitous civilization until its reign of TERROR is forced to an end—by any means necessary.⁴⁶

With remarkably few changes in word choice this might be the text of a suicide bomber's 'martyrdom video'. It remains to be seen whether extreme environmentalism and anti-capitalism can develop a plausible end state with a real chance of mobilizing a sufficiently large part of the population to achieve revolutionary change; or whether, as with Islamism, their eschatological rhetoric and murderousness will have the effect of alienating it from the population which they purport to represent. Without doubt, cyberspace enables such groups to take on forms that are hard to penetrate and to conduct attacks that are hard to defend against. At the same time, it does not change the fact that revolutionary groups need to do more than attack the status quo—they must also paint a convincing picture of a better future. It is significant, however, that as opposed to Islamism, which in the West appeals to a minority within a minority, environmentalism and anti-capitalism (particularly after the banking crash of 2008 which has fuelled hatred of the financial sector) are viewed broadly much more positively in society.

One of the things that make Anonymous interesting is that it is subversive in the sense of being disruptive of the existing order but its goals are not constructive in the way which genuinely revolutionary goals are thought to need to be. At present they are much more like the 19th and early 20th century anarchists with whom many members seem to consciously identify. Whether there are more disciplined revolutionaries within the movement employing the dumb mass of other cheap 'clicktivists' or 'hacktivists' as ad hoc 'shock troops' or not is unknown. As may be seen in the exchange with HBGary's CEO Greg Hoglund, there is a distinctly rudderless fanaticism to the group; they clearly were not interested in accepting his surrender. When one of the participants in that discussion asked Hoglund '[do] you understand what we are about? Do you understand why we do what we do?' he did not provide an answer.

But the question is highly apposite. Why do they do what they do? The most common answer is for the 'lulz'—Anonymous clearly makes it very easy for individuals to engage in high-impact but low-cost/low-effort activism; but it is hard to see how 'lulz' can constitute the 'sacred cause' which revolutionary groups have thus far always required to sustain their movements over the long term. Anonymous' championing of Wikileaks may be significant in this respect; it remains to be seen, however, whether this foray into political contest will outweigh the inherent capriciousness of the group—that is to say if it can adopt a coherent ideological identity.

Conclusion: DIY Revolution

Cyberspace alters much but it does not change everything. It enhances our ability as social beings to communicate, to collaborate, and to argue, not to mention consume—all traits as old as mankind itself. Connectivity has important implications for the practice of war but it does not substantially alter its nature as much as is commonly supposed. It does not with ‘cyberwar’ create a decisive new form of warfare that will reshape the international order in respect of the balance of power amongst states as we have come to know it. If anything it shores up the existing distribution of *military* power rather than undermining it.

This is not an invitation to be complacent, however, because new forms of business, economic, and social practices, including subversives and revolutionaries, have emerged to shape and take advantage of connectivity. It is not that the state is irrelevant to these new forms; it is rather that the focus of their energies, for better or worse, is simultaneously far larger (i.e., civilizational) and much smaller (i.e., corporate or individual) than the position occupied by the state. Thus it begs the question, what does the discipline of strategy have to add? As it has been oriented for many years—on the notions of *ultima ratio regum*, that power emerges from the barrel of a gun, and of states as the alpha and omega of discussion—perhaps not much; but in its essence as the combination of ends, means and ways by diverse social actors quite a lot.

Right now, the networked social movement that has most exercised the interest of the strategic studies community for the last decade is a strategic misfire—unable to achieve its desired end state because of its inherent outlandishness and popular undesirability. There are, however, a number of other networked social movements which are best described as being in a state of ‘strategic latency’ that have received little attention. ‘Strategic latency’ is a term which some analysts have used to describe ‘a condition in which technologies that could provide military (or economic) advantage remain untapped.’⁴⁷ The causes of the strategic latency of networked social movements are not technological: the means for them to exert power—to compel, or attempt to compel, their enemies to do their will—are available and growing in scale and sophistication. Nor are the causes of their latency to be found in their ways: various techniques ranging from disruption and sabotage, both real and virtual, to violent physical actions which resonate in the global mediascape, have been amply demonstrated and shown to be operationally effective. The cause of their latency is political: no networked social movements as of yet have attached existing, albeit new, ways and means to an end compelling enough to mobilize the masses.

The problem for future war horizon-scanners is not the degree to which they correctly apprehend technological challenges; it is the degree to which they understand the human motivations behind the usages of that technology. In a short at the Salt Lake Ignite conference (‘a community event celebrating the passion and creativity of geek culture’ whose slogan is ‘Enlighten us, but make it quick’), Matthew Reinbold, Creative Principal of *Vox Pop Design* enjoined his listeners:

When you organize your tribe and you’ve decided to tackle one of these problems make sure that you have a semi-permeable membrane made out of belief. That belief will tell you what ideas you should accept into your organization and what ideas you should reject. But ultimately it starts with you. You have to care. You can’t just idly sit back and decide that somebody else is going to solve your problems, that somebody else is going to come save you, that somebody else is going to be the champion that you’ve been waiting for; it is all up to you. The alternative is sitting in darkness, stumbling around victimized by boom and bust cycles. It’s imperative that you take action. You decide the problems that you want to solve, you decide the

world that you want to make. You can keep calm and just hope that things get better or you can make the effort to get excited and make the world that you want. Find your tribe. Decide what you believe. Rally them around you.⁴⁸

As calls to arms go this is mild stuff—there is no question that Reinbold is talking about non-violent activism in pursuit of changes which most people would regard as normatively positive—e.g., energy independence. Yet the subtext here is subversive too. It begins from the premise that the existing authority, the government, is unable or uninterested in changing the status quo because it is enslaved to corporate interests which are the real enemy. It trumpets a grievance of ‘victimization by boom and bust’ which resonates with youth, particularly urban, educated and middle class youth whose life prospects have been hit hard by the global economic crisis. It implies an ‘in-group’ and an ‘out-group’ and it ends with a rousing call to *make* the world what you want it to be. There is no call to violence—nor is any implied; however, a world of do-it-yourself revolution is one which would possess multiple variants amongst disparate groups embracing different ways and means to similar ends.

What is unclear is the ideology that might serve to focus the abundant dissatisfaction with the *status quo* to which Reinbold is reacting. What are the ‘sunlit uplands’ towards which he imagines us striving? If you could identify it would you fight it or join it? The pause which you require to consider that question is the reason that this historical moment is strategically significant. On the other hand, perhaps there is no overarching ideology; instead what will emerge from the informational turbulence in which contemporary international politics now finds itself is a world in which a multitude of passionately-held identity driven causes transcend the nation-state based ones which have underpinned strategic thinking for generations.

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9. Watching Hainan, Remembering Murmansk

Cold War Analogies, Maritime Access, and the Future of Warfare

Adam Grissom

Naval Race in the Western Pacific

Naval races have long been a harbinger of great-power competition. Just as Lysander built Sparta's first battle fleet to challenge Athenian naval mastery in the Aegean, and Tirpitz built Germany's *Risikflotte* to challenge British naval mastery in the North Sea, so today China is challenging American naval mastery in the Western Pacific. We are in the early stages of a classic naval race pitting a rising continental power against an established maritime power for control of the approaches to the Eurasian landmass.¹

The first definitive move of the race occurred last year when China deployed a maritime reconnaissance-strike complex comprised of over-the-horizon surveillance radars, ocean reconnaissance satellites, and an Initial Operational Capability (IOC) version of the DF-21D Anti-Ship Ballistic Missile (ASBM). Though a robust debate is occurring in the community of American experts over the maturity and implications of the DF-21D, its unveiling has precipitated a full-scale naval scare in the United States, reaching beyond the experts to the broader policy elite and popular culture.² The Department of Defense (DoD) has, meanwhile, accepted China's challenge by expanding certain naval acquisition programs, shifting additional assets to the US Pacific Fleet, and developing a new concept of operations it calls "Air-Sea Battle."³ Both countries are preparing for a long-term competition for control of the maritime approaches to East Asia. The question posed here is how the Western Pacific naval race is likely to unfold and what it means more broadly for the future of warfare.

The discussion in American defense circles about the rise of the People's Liberation Army Navy (PLAN) is often cast in terms of the most recent naval race in which the United States participated: the Cold War competition with the Soviets.⁴ Andrew Krepinevich, among many others, has drawn an analogy between the emerging situation in the Western Pacific and the US-Soviet naval race over the northern maritime approaches to Western Europe (the North Atlantic Treaty Organization's (NATO's) "Northern Flank") between 1960 and 1990.⁵ It is this experience, and its agreeable outcome for the United States, that provides the prism for current American thinking about China and maritime access in the Western Pacific.

This article unpacks the Northern Flank analogy and explores its implications for maritime access and denial in future warfare. It first describes the terms of the debate in the United States and, in particular, the "Anti-Access/Area Denial" (A2/AD) label that has been coined to describe the operational problem of maritime access in contemporary conditions. It then examines the Northern Flank analogy in as much detail as space limitations will allow, highlighting key aspects of the Cold War naval arms race that are sometimes overlooked in today's debates. It closes by assessing the validity of the analogy and its potential implications for maritime access and the future of warfare.



Anti-Access/Area Denial (A2/AD) in American defense planning

Transoceanic force projection has been the *sine quo non* of American military power for more than a century. With its transition from a continental power to a global power in the aftermath of the Spanish-American War of 1898, the United States began to perceive interests and obligations outside its hemisphere. Military commitments and requirements naturally followed, entailing the twin problems of force projection and access to potential theaters of operation. The ensuing century of military expansion — from the Great White Fleet and frontier constabulary forces to global maritime supremacy and a permanent overseas presence on four continents — redefined the United States as a global military power that is uniquely secure in its own continental position and both interested and capable of projecting power onto the Eurasian landmass.

Today, the implicit assumption throughout American defense planning is that all future major wars involving the United States will occur outside the Western Hemisphere, requiring the projection of military power across the Atlantic and/or Pacific oceans.⁶ The US armed forces are shaped and structured around this requirement, from US Transportation Command's massive transoceanic mobility and sustainment capability to the design of tactical units in the four services, all of which, from brigade combat teams to fighter wings, are designed to be deployed across the ocean and employed on foreign territory.⁷ Thus, the question of access and denial is central for American defense planners.

During the recent post-Cold War “interwar” period it would have been easy for anyone reading official DoD planning documents to believe otherwise. American air and maritime supremacy appeared so total that the problem of securing access for expeditionary force projection began to fade from view.⁸ This began to change at the turn of the new century when analysts from think tanks such as the RAND Corporation and the Center for Strategic and Budgetary Assessments (CSBA) began to take a fresh look at US force-projection plans and capabilities.⁹ They found troubling vulnerabilities, including trends in the development of land-based, medium-range ballistic and cruise missiles that could soon pose a major threat to American facilities overseas and perhaps surface ships.¹⁰ Concern gradually mounted within American's expert community, until Andrew Krepinevich crystallized the issue inside the Washington, DC, Beltway in 2003 by giving it a label and an acronym: Anti-Access/Area Denial (A2/AD).¹¹

For reasons that remain obscure, Krepinevich separated the access-denial challenge into two categories in his 2003 study. “Anti-Access” was defined as “actions that inhibit movement of military forces into a potential or current theater of operations.”¹² “Area Denial” was defined, on the other hand, as “actions that inhibit the movement of military forces within a theater of operations.”¹³ Thus the same actions would fall into a different conceptual category according to whether or not they occurred within an area that DoD defined as a “theater,” a geographic construct that in the past has often been granted on political or bureaucratic grounds rather than substantive military considerations. Though neither term is officially recognized or defined by DoD, A2/AD is now routinely used by those in government as well as the expert community. Few observe the distinction between “Anti-Access” and “Area Denial,” however, and many use the label A2/AD without knowing precisely what the letters represent. Moreover, the terms have in recent years acquired a distinctly maritime dimension that is not reflected in Krepinevich's original wording. In practice, the longstanding American defense planning challenge of maritime access has been recast as A2/AD.¹⁴ This article will observe current convention without attempting to resolve these issues.

Watching Hainan...

Though think tanks succeeded in raising awareness of the A2/AD challenge within the expert community, the raging wars in Iraq and Afghanistan kept “next-war” issues, such as maritime access, on the back burner in DoD during the first decade of the 21st century. This changed in late 2010, when the Chief of Naval Operations reported that the PLAN had fielded an Initial Operational Capability (IOC) version of the *Dong Feng* (East Wind) missile, the 21D.¹⁵ China’s DF-21D is a road-mobile, two-stage, solid-propellant, medium-range ballistic missile (MRBM) with an estimated maximum operational range of 800 nautical miles. It is believed to carry a maneuverable reentry vehicle (MaRV) warhead equipped with a terminal radar seeker to guide the final stages of an attack on a ship target. It was developed from the DF-21A MRBM, itself a development of the 1960s-era JL-1 submarine-launched ballistic missile.¹⁶

In recent years the PLA has also deployed several constellations of satellites that could potentially provide reconnaissance and targeting data to the DF-21D. These are reported to include electro-optical, synthetic aperture radar, and electronic intelligence satellites. The *Yaogan 9* constellation of three radar satellites launched in March 2010 appear to fly in distinctive orbital formation, leading some to suspect they are dedicated ocean reconnaissance platforms. The *Yaogan 11* constellation of three radar satellites launched in September 2010 and the *Shi Jian-6* pair of electronic intelligence satellites may also have a naval role.¹⁷

The scenario that concerns many American planners is that of a crisis in the Western Pacific requiring an American military response in support of a regional ally, such as Taiwan, South Korea, Japan, or the Philippines. Should Beijing find American military involvement unacceptable, the PLA’s conventional MRBMs land-attack cruise missiles have the capability to effectively prevent large-scale air operations from existing US airbases in the region.¹⁸ US Navy (USN) Carrier Strike Groups (CSGs) are therefore expected to carry most of the burden of an American response. The advent of the DF-21D, as a supplement to existing air, surface, and subsurface capabilities, substantially raises the potential risk to CSGs operating in the Western Pacific.

The strategic implications of the Western Pacific A2/AD competition are potentially quite serious. If China demonstrates the ability to limit or deny access to the Western Pacific, American options for supporting its allies in the region — whether against China or some other threat — would become contingent, to some degree, on Chinese acquiescence. The value of American security guarantees would decline, raising fundamental questions for regional stability. The United States has demonstrated that it wishes to avert this situation by, among other things, shifting additional naval assets to the Pacific Fleet and adjusting its research and acquisition programs to account for growing PLAN capabilities. The United States and China are, therefore, beginning a closely coupled action/reaction dynamic in the development of naval capabilities in the Western Pacific. In other words, they are beginning a naval race.

How will this naval race unfold over time? No one can say for certain, of course, but many in American defense circles point to the extended US-Soviet Cold War competition for access to the Norwegian Sea as an analogy for understanding the dynamics of today’s emerging naval competition. We turn next to examine this “Northern Flank” analogy and its potential implications.



...Remembering Murmansk

The strategic outlines of the Northern Flank naval race may be familiar to readers. The military fulcrum of the Cold War was Central Europe, where NATO and Warsaw Pact ground and air forces faced each other across the inner German border. NATO considered it possible that the Soviet Union might be tempted to invade Western Europe unless NATO maintained sufficient conventional forces to deny a quick victory to Moscow without resort to nuclear weapons. The conventional balance in Central Europe was, therefore, a matter of primary concern to policymakers and planners.¹⁹

An essential element of the conventional balance in Europe was the ability of the United States to reinforce NATO with heavy ground units stationed in the continental United States. Some of these units would deploy by air and draw equipment from pre-positioned stocks in Europe, but the bulk would move by sea with their equipment and supplies. These reinforcements would be necessary to sustain NATO resistance over time in the face of large-scale Soviet mobilization of its reserve forces and to throw back the Soviets from territorial gains that they would undoubtedly make in the initial weeks of a war.²⁰

As a result, the credibility of NATO's conventional deterrent rested in some measure on the ability of the United States to move reinforcements to Europe by ship. This meant that NATO was forced to take seriously the defense of the sea lines of communication (SLOCs) between the United States and Western Europe, particularly West Germany's ports on the North Sea. The Soviet Union had a concomitant interest in denying, or at least appearing able to deny, those SLOCs to NATO in order to prevent these reinforcements from influencing the correlation of forces.²¹

Access to those SLOCs turned on maritime access to the northern approaches to Western Europe. To the extent that NATO could control the Norwegian Sea it could defend the SLOCs and the North Sea ports required for reinforcing the continent. This was NATO's so-called "Northern Flank." If the Soviets could control the Norwegian Sea they could turn this flank and jeopardize NATO's conventional reinforcements. At stake was not just wartime effectiveness but also peacetime NATO-alliance cohesion, the bargaining power of the two blocs, and stability during crises.²²

The control of the Norwegian Sea was also important to the Soviets for reasons other than access to NATO SLOCs. The Soviet Navy operated a key portion of its ballistic missile submarine (SSBN) bastion from ports near Murmansk. During the early years of the Cold War, these SSBNs transited the Norwegian Sea to operate off the Atlantic seaboard of the United States. As the Soviets fielded longer-range, submarine-launched ballistic missiles, the SSBNs could operate from the Barents Sea itself. In both cases the Soviets needed to prevent NATO from controlling the Norwegian Sea in order to protect SSBNs transiting to mid-Atlantic launch areas during the early Cold War period and protect later SSBNs operating in the Barents Sea bastion.²³ The Norwegian Sea, therefore, played an important role in the security and stability of Soviet second-strike capabilities.

An unfortunate byproduct of the close proximity of NATO SLOCs and the Soviet SSBN bastion was that Soviet naval capabilities required to protect the bastion naturally created the ability to deny the SLOCs to NATO. The reverse was also true. The NATO capabilities required to secure the SLOCs naturally created the capability to jeopardize the Soviet SSBN bastion and, therefore, the invulnerability of its second-strike capability. The US intelligence community debated for decades whether the Soviets really intended to conduct a denial campaign against the SLOCs or were merely

positioning themselves to protect their SSBN bastion.²⁴ Ultimately NATO was obliged to act as if the latter were true because Soviet intentions were unknowable and subject to change.

Figure 1, below, indicates the consensus position among US intelligence analysts regarding Soviet naval operating areas during a future conflict. The area shaded darkest on the map corresponds to the projected Soviet SSBN bastion, incorporating the Barents Sea and the Norwegian Sea. This area extends approximately 2,000 km from the main Soviet naval airfields on the Kola Peninsula. Inside this zone, the intelligence community expected the Soviet Navy to conduct “sea control” operations, effectively denying access to Western naval forces and using the area themselves for strategic strike operations.

Figure 1: Projected Soviet Naval Operating Areas



Source: “Soviet Naval Strategy and Programs Through the 1990s,” National Intelligence Estimate NIE11-15-84, 21 December 1984. Originally classified Secret, declassified as sanitized on 29 October 1999.

The part of the map shaded more lightly, extending some 3,000 km from the airfields on the Kola Peninsula, is the area in which the intelligence community expected the Soviet Navy to conduct

“denial” operations, denying or disrupting Western naval operations sufficient to prevent those forces from accomplishing their missions, which the Soviets expected to be air and cruise missile strikes on Soviet land targets. Note that the denial area incorporates the approaches to ports in Western Germany, Belgium, and the Netherlands that would be used to disembark US reinforcements.

Very broadly speaking, the story of the US-Soviet competition for maritime access to the Norwegian Sea began in the mid-1950s and unfolded in three major phases.²⁵ Prior to this, the Soviet Navy was primarily designed to protect the coastal areas of the Soviet Union from attacks by Western naval forces. Its inventory comprised mostly short-range diesel attack submarines (SSs) and surface patrol craft (the OSA and KOMAR classes) equipped with torpedoes and short-range SS-N-1 and SS-N-2 anti-ship missiles.²⁶ Soviet Naval Aviation was equipped with Tu-95 BEAR and Tu-16 BADGER bombers with limited anti-ship capabilities.²⁷ The Soviet Navy of the early 1950s was, therefore, a coastal defense force with a limited capacity for contesting the immediate approaches to Soviet waters. It did not possess the capability to threaten NATO SLOCs beyond a few long-range submarines and potential mining operations in Western harbors.²⁸

During the mid-1950s, and particularly in the aftermath of the Suez Crisis, Soviet Premier Nikita Khrushchev decided that the Soviet Union should have a blue water navy. In 1956, he issued the order to expand the Soviet Navy into a force capable of carrying out four missions: protecting the new class of YANKEE-class SSBNs as they operated abroad, defending the homeland against US carrier attacks, conducting power-projection operations in the “Third World,” and operating against NATO SLOCs in a time of war. A subsequent Central Intelligence Agency (CIA) estimate described the decision as follows:

With Khrushchev’s ascent to power in the mid-1950s, the Soviet Navy undertook to develop new capabilities to meet the threat posed by the carrier strike fleets. The course adopted was to develop anti-ship cruise-missile systems for surface ships, submarines, and aircraft, and to institute long-range surveillance of US aircraft carrier movements at sea. ... By about 1960 the Soviet Navy had developed capabilities to counter the carrier strike fleets, defend the maritime approaches to the USSR, and supplement the emerging strategic strike capability of the newly-formed Soviet Strategic Rocket Forces.²⁹

Khrushchev’s decision inaugurated the first phase of US–Soviet competition for control over the Norwegian Sea. During the late 1950s and early 1960s the Soviets significantly modernized their surface, submarine, and naval aviation to implement the new strategy. In particular, the Soviet Navy created a reconnaissance-strike complex capable of targeting Western carrier strike groups at extended ranges. The key elements of this reconnaissance-strike complex were the KRESTA-class cruisers (CGs); KOTLIN-class, guided missile destroyers (DDGs); and ECHO-class, nuclear-powered cruise-missile submarines (SSGNs). All of these carried the long-range (250 nautical miles) SS-N-3 anti-ship cruise missile (ASCM).³⁰ The SS-N-3 was a large, turbojet-powered missile carrying 1,000 pounds of explosives and a terminal attack radar.³¹ Several could be carried by each of the new classes of ships. The SS-N-3 created a serious naval scare in the West, not unlike the DF-21D is doing today, because it appeared to create the capacity for the Soviet Navy to engage and destroy the US Navy’s key capital ships at extended ranges. By the end of the decade, US intelligence sources estimated that the Soviet Navy would find and sink most US carriers in the initial stages of a war.³²

The Soviets also introduced the sensor and targeting network necessary to employ the SS-N-3 against Western naval forces. In the late 1950s, the Soviets developed an over-the-horizon electronic

support measure (ESM) capability that allowed their Navy to monitor the location of NATO naval forces from their radars, communications, and other electronic emissions.³³ The BEAR-D variant of the Tu-95 bomber was also introduced, carrying a large maritime radar to track and target Western naval forces, along with “trawlers” that tailed these forces during peacetime to provide an initial fix should war erupt.³⁴

The Soviet concept of operations was that the ESM would provide a general indication of the location of Western naval units, particularly carrier groups emitting unique radar and radio signatures. “Tattletale” trawlers would supplement this picture during peacetime. In the initial hours of a conflict, BEAR-D reconnaissance aircraft and submarines would fix the locations of Western naval forces and pass this data to ECHOs, KRESTAs, and KOTLINs, which would then launch coordinated waves of SS-N-3s at the predicted locations of the targets. When the ASCMs arrived in the vicinity of the Western naval units, they would activate their onboard terminal-attack radars and strike key targets, ideally the strike carriers.³⁵

The United States developed and implemented countermeasures against this capability during the late 1960s and early 1970s. The central element of this response was the improvement of fleet air defense capabilities against ASCM-type targets. The US Navy fielded the TRUXTON and BELKNAP classes of CGs designed to accompany carrier strike groups and provide air defense with the Standard Missile 1 (SM-1), which was capable of intercepting air targets out to 40 nautical miles.³⁶ The USN also fielded the E-2A Hawkeye airborne early-warning aircraft and the Navy Tactical Data System to link the E-2As with F-4 Phantoms flying combat air patrols with AIM-7E Sparrow medium-range, air-to-air missiles against Soviet aircraft and cruise missiles.³⁷ The USN improved its anti-submarine warfare (ASW) capabilities by upgrading its fixed sonar system in the North Atlantic, fielding the P-3 maritime patrol aircraft equipped with an advanced magnetic anomaly detector and sonar-equipped buoys, and fielding the STURGEON class of quiet, long-range nuclear attack submarines (SSNs).³⁸

The US-Soviet competition, therefore, turned on the issue of range. In the air-surface domain, it became a competition between the range of maritime search radars against US air surveillance radars. In terms of airborne weapons, it was the range of the SS-N-3 against that of the F-4s and SM-1s. In the sub-surface domain, it became a competition of the SS-N-3 against the P-3 and STURGEON SSNs hunting the ECHO SSGNs. Both sides actively sought to out-range their adversary’s sensors, platforms, and weapons, thereby gaining a key advantage in naval engagements conducted by heavily armed but poorly protected units.

Phase two of the competition began in the late 1960s as the Soviets reacted to US countermeasures against the Soviet maritime reconnaissance-strike complex. Their response was to extend the range of their sensors, strike platforms, and weapon systems. The most important innovation was the development of the Radar Ocean Reconnaissance Satellite (RORSAT) constellation that extended Soviet maritime sensor coverage to the entire globe.³⁹ Though the initial generation of RORSAT was primitive by Western standards, it provided a useful complement to the ESM and airborne elements of the sensor system.⁴⁰

The Soviets also expanded their arsenal of anti-ship missiles, developing the air-launched AS-4B (250 nm), AS-5 (100 nm), AS-6 (250 nm) missiles to complement the SS-N-3 in the counter-carrier mission. The new generation of anti-ship missiles (ASMs) were much faster and more difficult to target than the SS-N-3. They were guided by improved radar seekers, passive receivers for anti-radar operations, and, in some cases, passive infrared seekers. All flew profiles that were more difficult to intercept with SAMs.⁴¹

Finally, the Soviets increased the range and capability of missile-carrying platforms. The KARA class CGs, KRESTA CGs, and KRIVAK FFGs were all introduced during this period and carried the new SS-N-14 dual anti-submarine and anti-ship missile.⁴² The Tu-95 BEAR F was upgraded to carry the AS-3 and new ESM and reconnaissance variants were introduced, the Tu-16 BADGER was similarly upgraded to carry the AS-4 and act as an improved sensor platform, and the Tu-22 BLINDER was introduced as another AS-4 carrier.⁴³

Together these improvements represented an enhanced threat to NATO operations in the Norwegian Sea. The United States responded in phase two by again increasing the range of its own sensors, platforms, and weapons. The 1970s saw the introduction of the VIRGINIA and CALIFORNIA-class CGs and SPRUANCE DDGs equipped with longer-range (90 nm) SM-2s,⁴⁴ as well as the long-range air defense team of the E-2C Hawkeye and F-14A Tomcat equipped with the AWG-9 long-range, air-to-air radar and the AIM-54 long-range (100 nm) air-to-air missile.⁴⁵ The United States also improved its anti-submarine capabilities by introducing the LOS ANGELES-class SSN, upgrading the fixed sonar array system in the North Atlantic, and developing an improved version of the P-3 Orion.⁴⁶ Finally, the Navy fielded its own AGM-84 Harpoon ASM carried by surface ships, aircraft, and submarines capable of striking Soviet surface targets.⁴⁷

Together these improvements greatly expanded the range at which US naval forces could detect and engage Soviet airborne, surface, and subsurface platforms and the missiles carried by those platforms. The concept of operations was to “shoot the archer.” E-2Cs would detect an inbound Soviet air raid at extended range, which would then be engaged by F-14s before they could launch their ASMs against US surface ships. E-2Cs, satellites, and surface sensors would detect Soviet surface units before they could launch their missiles, which would then be engaged by US platforms carrying Harpoons. Soviet submarines would be detected by fixed sonar arrays and prosecuted by the long-range P-3s and SSNs before they could engage US surface ships.

NATO also countered the growing Soviet threat against its SLOCs by expanding the geographic scope of the Northern Flank. The alliance began planning to operate land-based fighters and maritime aircraft from airfields in Norway, secured by US Marines as well as Norwegian forces, to attrite Soviet aircraft as they transited to the Norwegian Sea. Capabilities in Scotland were similarly expanded, as were US air and maritime patrol capabilities based in Iceland. These redeployments further adjusted their air and anti-submarine warfare (ASW) umbrella north of the SLOCs.⁴⁸

In retrospect, it is clear that the US response really began to gather momentum in phase two of the competition. The breadth and technical sophistication of the response are notable, as is the level of effort and cost involved. What is less clear is how the US and Soviet responses influenced the overall balance in the Norwegian Sea. Though the technical systems fielded by the United States and NATO were quite impressive, the mid-1970s were also a period of significant hollowness within the force. Training hours and steaming days declined even as the Soviet Navy continued to increase its equivalent operations and training activities.⁴⁹ Had the situation devolved to a test of arms during the 1970s it is not clear which side would have been more capable of adapting the potential of their technical tools to the particular operational context of the conflict. The interactions between the two sides were limited, as were observable exercises, making the assessment of a net balance quite complex.

Phase three of the competition began in the early 1980s. The Soviets again sought to offset American responses through increasing the range of sensors, weapons, and platforms. The RORSAT constellation was substantially expanded and upgraded during this period. The Soviet Navy also fielded the KIROV class of heavy cruisers armed with long-range (300 nm) SS-N-19

ASMs and long-range SA-N-6 SAMs, along with the SLAVA-class DDGs armed with 300-nm range SS-N-12s and the SOVREMENNY-class DDGs armed with very long range and fast SS-N-22 ASMs.⁵⁰ The surface ships were complemented by the SIERRA and AKULA-class SSNs, which were much quieter and armed with the 1600nm SS-N-21 sea-launched cruise missiles.⁵¹ The Soviets also fielded a quieter SSGN, the OSCAR, equipped with the SS-N-19.⁵² Essentially, the Soviet submarine fleet significantly reduced the range at which they could be detected while extending the range at which they could strike US surface units.

In the aerial domain, the Soviets fielded the Tu-22M (sometimes referred to as the Tu-26) BACKFIRE-C armed with the 400-nm range AS-6 ASM.⁵³ The Soviets also deployed the Su-27 FLANKER long-range fighters for the first time to protect the BEARs, BLINDERS, and BACKFIRES against US fighters.⁵⁴ Finally, the Soviet Navy also began constructing a conventional large-deck carrier that some believed would be tasked with contesting air superiority of the Norwegian Sea during a time of conflict.⁵⁵

For the United States, phase three of the competition occurred during the years of the Reagan buildup. The USN fielded the TICONDEROGA and ARLEIGH BURKE classes of AEGIS-equipped surface combatants, the block 3 version of the SM-2 to operate with AEGIS, the B and C models of the AIM-54, the F/A-18 Hornet, and the ASM-135 anti-satellite missile for targeting Soviet RORSATs.⁵⁶ Perhaps more importantly, however, the DoD again filled the coffers for training, maintenance, and steaming days. US forces became substantially more battle ready, and declassified intelligence sources from the period suggest that the intangible factors of experience and adaptability began to tilt heavily in favor of the United States.⁵⁷ An example of this is the exercise conducted by the United States in 1986, during which a carrier strike group adopted emissions control measures that prevented the Soviets from detecting or tracking the strike group until it began simulated strike operations against Soviet bases near Murmansk.⁵⁸

What can be learned from the Northern Flank analogy?

This examination of the US-Soviet naval race on NATO's northern flank suggests five potential insights for the emerging naval race in the Western Pacific. First, the United States and the Soviet Union clearly engaged in a dynamic of coupled action/reaction innovation that substantially accelerated the state of the art in maritime access and anti-access operations. The development of anti-ship cruise missiles, anti-ship missiles, long-range SAMs and air-to-air missiles, ocean surveillance satellites, and a number of other capabilities occurred far more quickly than they would have if the US-Soviet competition had not existed.

The emerging US-PRC competition in the Western Pacific fits this description as well. China has integrated anti-ship MRBMs with over-the-horizon radars and satellite constellations in an innovative manner that harkens back to the reconnaissance-strike complex built around the SS-N-3 in the 1960s. It has developed MRBMs, particularly the DF-21C, and land-attack cruise missiles for striking airbases ashore in an integrated counter-access campaign. The PLAN's KILO, YANG, SONG, and SHANG classes of SSNs are ASCM-capable, as are its long- and short-range strike aircraft. The PLA is developing the J-20 stealth fighter or strike aircraft, the role of which is not clear in public sources, and a conventional aircraft carrier. All of this has occurred in the same amount of time required for the Soviets to complete the first phase of the Cold War competition for access to the Norwegian Sea. The United States has responded by developing the Air-Sea Battle concept; shifting LOS ANGELES SSNs, SEA WOLF SSNs, TRIDENT SSGNs, and ballistic missile

defense-capable (BMD) AEGIS ships to the Pacific Fleet; expanding the number of BMD-capable ships it will acquire; and adjusting its basing posture in the Western Pacific. The action/reaction dynamic of a naval race clearly already exists.⁵⁹ In coming years, this dynamic will drive forward the state of the art in access/anti-access capabilities at a rate, and in directions, they would not have otherwise.

Second, to the extent that the Western Pacific naval race follows a similar trajectory to the Northern Flank naval race, innovation can be expected to occur rapidly along multiple axes in multiple domains. “Vertical innovation” will pivot on the interaction of the range of sensors, platforms, and weapons. Successive generations of sensors will have greater theoretic detection ranges while platforms and weapons will become stealthier to reduce the de facto range of sensors. Platform and weapon ranges will be extended, and speeds accelerated, on both the offensive and defensive ends of the competition. “Horizontal” innovation will occur as the adversaries seek advantages in new domains: air, surface, subsurface, space, electromagnetic, geographic, and cyber. As during the Cold War, the interaction of these innovations will become quite complex and difficult to model and understand. This complexity lends uncertainty and instability to naval races, since the platforms are relatively small in number and lacking in survivability while, at the same time, being highly lethal to each other. A single comparative advantage can turn the relative naval balance of power on its head, but the cross-domain effects of vertical and horizontal innovation are very difficult to predict. As a result, the emerging naval race in the Western Pacific is likely to produce periods of apparent instability and resulting naval scares. Cold War alarm over the Soviet’s SS-N-3 and current worry over China’s DF-21D are instructive in this regard.

Third, the innovations pursued by the competitors will not be driven solely by objective assessments of the technical military balance, to the limited extent these are possible in the first place. Though space limitations for this paper prevent a detailed discussion of the complicated factors that shaped Soviet and US naval innovation during the Cold War, sources make clear that the actual processes that produced key innovations in the US-Soviet competition were influenced by a combination of perceived military requirements and politics at the national and bureaucratic levels of both countries.⁶⁰ This echoes the academic literature on military innovation and arms races, which emphasizes the complex relationship between the capabilities a nation “should” develop under objective conditions and the capabilities actually developed in practice.⁶¹ To understand how the emerging naval race in the Western Pacific will unfold, it will be necessary to understand the political and bureaucratic systems on both sides.⁶²

Furthermore, the actual balance of military capabilities “in the field” is highly dependent on innovation and adaptability within operational units. The technical systems fielded by the competitors are merely potential until they are translated into action by operational units. The ability of those units to adapt their technical systems to the needs of the moment, and innovate, is the primary determinant of the true balance of capabilities, yet this is extraordinarily difficult to analyze and predict.⁶³ As Robert Angevine has described in his path-breaking work on naval innovation during the Cold War, the USN was able to substantially reduce the effectiveness of Soviet ASCMs during the 1960s by experimenting with dispersed formations and emissions-control procedures. Senior US officers of the period concluded that these new tactics would alter the naval balance in the initial days of a future conflict. However, the impact of these bottom-up innovations was not evident to those assessing the naval balance from inside the Beltway. Adaptation and bottom-up innovation of this sort distorts the actual balance from the purely technological balance, adding further uncertainty and instability to naval races.⁶⁴

Fourth, the innovations that occur in the context of a naval race are not limited to that area or those competitors. The US-Soviet naval race accelerated innovations that quickly leaked to other powers and other regions of the world. For example, the Soviet Navy supplied the SS-N-2 to more than 25 countries and sold the SS-N-3 to Angola, North Korea, and Syria.⁶⁵ Indeed much of China's own advanced naval weaponry, from KIL0-class submarines to the *Shilang*, was originally developed by the Soviets during the Cold War.

The combination of rapidly advancing state-of-the-art military technologies and proliferation of these developments can have serious consequences for states that are not involved in the competition itself. For example, in 1967 the Egyptian Navy sank the Israeli DDG Eilat with SS-N-2s provided by the Soviet Union. Indian Navy ships did the same to a Pakistani DDG and merchantmen in 1971. The 2006 Lebanon War featured a Chinese C-802 ASM employed by Hezbollah, a non-state actor. This suggests that the fruits of the Western Pacific naval race are likely to proliferate to other actors in the international system. For the United States, the implications of this proliferation should be manageable, because the USN will be involved in the cutting edge of these developments. For allies and others who are not involved in the competition, however, the ramifications may be more serious as the state of the art accelerates and proliferates.

The Falklands War of 1992 provides an example from recent history. Both the British and Argentines possessed small numbers of advanced naval systems but neither was directly involved in the Cold War naval race. Despite the rudimentary nature of the Argentine anti-surface threat, the Royal Navy suffered 15 ships damaged and six major ships sunk (SHEFFIELD, ARDENT, ANTELOPE, COVENTRY, ATLANTIC CONVEYOR, and GALAHAD). Had the USN been conducting the operation instead of the British Royal Navy, with CSGs supported by AEGIS ships instead of "through-deck" carriers and ASW-oriented surface ships, there is little question that the Argentines would have enjoyed little if any success. Strictly speaking, the United States was no more capable than the Royal Navy, but it had been preparing to repel serious air and missile attacks for decades and invested in the necessary capabilities. The Royal Navy had not and paid a tremendous price for falling behind.

Another analogy might be drawn from the development of suppression of enemy air defense (SEAD) capabilities over the past four decades. During the 1960s there was an intense competition between the United States and the Soviet Union in the air defense domain. In Southeast Asia, the United States lost hundreds of aircraft to Soviet-supplied (and sometimes Soviet-operated) air defenses over North and South Vietnam. The integrated air defense system (IADS) protecting North Vietnam was particularly vexing for the United States. As a result, the United States devoted enormous resources and energy in ensuing decades to overcome such IADSs. By doing so, it rapidly advanced the state of the art in SEAD, fielding stealth aircraft, land-attack cruise missiles, stand-off precision weapons, advanced anti-radar weapons, jamming and spoofing techniques, and tactics for quickly "taking down" an IADS. While some Western allies also invested in SEAD capability, all began to lag substantially behind US capabilities. By 1990, the United States was essentially required to participate in any Western air operation confronted by ground-based air defenses, because it alone had developed the capability to neutralize air-defense systems at little risk. The operation currently underway in Libya is a notable example of otherwise advanced Western forces requiring the United States to "kick the door down" against quite modest and dated air defenses. It is conceivable that a similar dynamic might evolve in the maritime access realm, in which the United States ends up far ahead of its allies because it is and will be for the foreseeable future competing directly with China. As anti-access capabilities proliferate, Western navies may find themselves more dependent on the United States than they are today.

This dynamic may be most problematic for European navies, which are accustomed to possessing a technical edge over non-Western navies, yet are unlikely to become involved in the Western Pacific. If China continues to proliferate advanced systems to developing states, European navies may find that they are outclassed in some respects by the anti-access capabilities possessed by some of these recipients. Given the pointed nature of European refusals to consider supporting the United States in a future confrontation with China, the United States may feel little inclination to share its advanced countermeasures with Europeans or support European operations when confronted by proliferated advanced anti-access systems. One indirect result of the Western Pacific naval race may be the obsolescence of European naval power.

Finally, during the cold war the Northern Flank naval race was simply one aspect in a grand strategic competition that already dominated the relationship between the two superpowers. Earlier examples of naval races, such as the Anglo-German naval race at the turn of the twentieth century, suggest that these races can influence the broader political relationship between the competitors, particularly when naval scares become political and social issues.⁶⁶ The concern remains that a narrow military-technical competition in the Western Pacific may drive the broader political dynamics of the international system, rather than the other way around.

1 Lysander's fleet destroyed the Athenian fleet at the battle of Aegospotami in 405 BC, ending the Peloponnesian War. On Lysander see Robert B. Strassler, ed., *The Landmark Thucydides: A Comprehensive Guide to the Peloponnesian War*, New York: Free Press, 1996, p.549. On the Anglo-German naval race see Peter Padfield, *Great Naval Race: Anglo-German Naval Rivalry, 1900-1914*, New York: Harper, 1974.

2 For a sample from the expert community, see Wendell Minnick, "China Ramps Up Missile Threat with DF-16," *Defense News*, 21 March 2011, David Slayton and Craig Hooper, "China at Sea," *Hoover Digest*, 29 March 2011, and Andrew S. Erickson "On the Verge of a Game Changer," *Proceedings*, May 2009. From popular culture see Erik Sofge, "How it Works: China's Anti-Ship Ballistic Missile," *Popular Mechanics*, 29 December 2010 and the 2 December 2010 episode of "The Office" situation comedy in which characters Michael Scott and Oscar Nunez engage in a discussion of the DF-21D and its implications for the US position in Asia.

3 On current and prospective US responses, see Ronald O'Rourke, *China Naval Modernization: Implications for US Navy Capabilities*, Washington, DC: Congressional Research Service, April 2011.

4 See for example Galrahn, "Chinese Submarines vs. Soviet Submarines vs. US Submarines," Information Dissemination weblog, 5 March 2008, Michael McDevitt, *China's Naval Modernization: Cause for Storm Warnings?*, Washington, DC: National Defense University, 2010.

5 Andrew Krepinevich et al, *Meeting the Anti-Access and Area Denial Challenge*, Washington, DC: Center for Strategic and Budgetary Assessments, 2003; and Ronald O'Rourke, *China Naval Modernization: Implications for US Navy Capabilities*, Washington, DC: Congressional Research Service, 2008.

6 See for example the *Report of the Quadrennial Defense Review*, Washington, DC: Department of Defense, February 2010.

7 This is to be expected in the US Navy and Marine Corps, which are explicitly expeditionary in mission and purpose. It is notable, for example, that US Army combat units are also commonly categorized as "heavy," "medium," or "light" depending on their strategic deployability.

8 For example there was no substantive discussion of anti-access challenges in the 1993 Base Force and 1997 Quadrennial Defense Review report. See Lorna Jaffe, *The Development of the Base Force: 1989-1992*, and *Report of the Quadrennial Defense Review*, Washington, DC: Office of the Secretary of Defense, 1997.

9 The first study of this type was Alan Vick et al, *Snakes in the Eagle's Nest: A History of Ground Attacks on Air Bases*, Santa Monica, CA: RAND, 2005. The significance of this work was not widely appreciated for some time afterward.

10 See for example David Orletsky et al, *Airbase Vulnerability to Conventional Cruise Missile and Ballistic Missile Attacks: Technology, Scenarios, and US Air Force Responses*, Santa Monica, CA: RAND, 1999, Roger Cliff et al, *Entering the Dragon's Lair: Chinese Antiaccess Strategies and their Implications for the United States*, Santa Monica, CA: RAND, 2007.

11 Krepinevich, *Meeting the Anti-Access Area Denial Challenge*.

12 Ibid.

13 Ibid.

14 See for example, "Anti-Access/Area Denial Challenges," briefing by Maj Gen Dave Scott, Washington, DC: Headquarters Air Force, 6 October 2010.

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- 15 Remarks by Admiral Robert F. Willard, Commander in Chief US Pacific Command, to Asahi Shimbun, 26 December 2010.
- 16 “DF-21 (CSS05),” Jane’s Strategic Weapon Systems, *Jane’s Online*, 1 June 2010.
- 17 Craig Covault, “China’s Military Space Surge,” *Aerospace America*, March 2011.
- 18 Roger Cliff, Anti-Access Measures in Chinese Defense Strategy, Testimony before the US China Economic and Security Review Commission, 27 January 2011.
- 19 Serious treatments include John Mearsheimer, *Conventional Deterrence*, Ithaca: Cornell University Press, 1983, Barry Posen, “Measuring the European Conventional Balance,” *International Security*, v.9, n.3, 1985, Joshua Epstein, *The Calculus of Conventional War: Dynamic Analysis Without Lanchester Theory*, Washington, DC: American Enterprise Institute, 1985, and Richard Bitzinger, *Assessing the Conventional Balance in Europe 1945-1975*, Santa Monica, CA: RAND, 1985.
- 20 See US *Air and Ground Conventional Forces for NATO: Mobility and Logistics Issues*, Washington, DC: Congressional Budget Office, 1978.
- 21 John Mearsheimer, “A Strategic Misstep: The Maritime Strategy and Deterrence in Europe,” *International Security*, v.11, n.2, Fall 1986, pp.3-57.
- 22 Ibid.
- 23 See “Soviet Naval Strategy and Programs Through the 1990s,” National Intelligence Estimate 11-15-84/D, 21 December 1984, originally classified Top Secret, declassified on 29 October 1999 as sanitized.
- 24 See for example “Soviet Intentions and Capabilities for Interdicting Sea Lines of Communication in a War with NATO,” Interagency Intelligence Memorandum, originally classified Top Secret, declassified and released as sanitized in October 1994. NARA number illegible.
- 25 This phasing construct, and the discussion that follows, offer a simplified account of a complex and dynamic phenomenon. The thirty-year history of the Soviet-US naval competition deserves its own volume-length treatment. This account seeks to highlight those aspects of most value to the current situation.
- 26 See Michael McGwire, *Soviet Naval Developments: Capability and Context*, New York: Praeger, 1974, Steve Kime, “A Soviet Navy for the Nuclear Age,” *Parameters*, v. 10, n1., 1980.
- 27 See National Intelligence Estimate 11-3-55, “Soviet Capabilities and Probable Soviet Courses of Action Through 1960,” 17 May 1955, originally Top Secret, declassified on 22 September 1993, NARA NN3-263-93-007.
- 28 See Michael McGwire, *Soviet Naval Policy: Objectives and Constraints*, New York: Praeger, 1975.
- 29 See National Intelligence Estimate 11-10-69, Trends and Prospects in Soviet Maritime Activities, 12 June 1969, originally classified Secret, declassified on 24 February 1994.
- 30 The KOTLINs were introduced beginning in 1955, the ECHOs in 1960, and the KRESTAs in 1964.
- 31 Jane’s Strategic Weapon Systems, *Janes Online*, 16 August 2010.
- 32 “National Intelligence Estimate: Soviet Navy Policy and Programs,” NIE-11-15-74, 23 December 1974. Originally classified Top Secret, declassified as sanitized by CIA Historical Review Program, date illegible. See also Angevine, “Hiding in Plain Sight,” 25.
- 33 For an excellent discussion of Soviet naval radio direction finding and other ESM capabilities, see Jonathan F. Solomon, “Defending the Fleet from China’s Anti-Ship Ballistic Missile: Naval Deception’s Roles in Sea-Based Missile Defense,” unpublished MA thesis, Georgetown University, June 2011.
- 34 “Soviet Military Capabilities and Policies, 1962-1967,” National Intelligence Estimate 11-4-63, 22 March 1963. Originally classified Top Secret, declassified as sanitized by the CIA Historical Review Program.
- 35 “Capabilities of Soviet General Purpose Forces,” National Intelligence Estimate 11-14-63, 8 January 1964. Originally classified Secret, declassified as sanitized by the CIA Historical Review Program.
- 36 Jane’s Naval Weapon Systems, *Jane’s Online*, 10 May 2011.
- 37 The E-2A was introduced in 1964 with the first generate NTDS. The F-4 Phantom II entered fleet service in July 1961. Jane’s Aircraft Upgrades, *Jane’s Online*, 29 March 2011.
- 38 The P-3 Orion joined the fleet in 1962. The STURGEON entered service in 1967.
- 39 “Soviet Military Capabilities and Intentions in Space,” *National Intelligence Estimate* 11-1-80, 6 August 1980. Originally classified Top Secret, declassified as sanitized by CIA Historical Review Program.
- 40 Surface ships within 2,000 km, 4.
- 41 The AS-4B was a large (5,900 kg) anti-radar missile powered by a turbojet at up to Mach 4.0 and guided to its target by a passive radar receiver. It entered service in 1975. The AS-5 was a medium (3,000 kg) anti-ship missile capable of a sea-skimming mode guided in its terminal phase by an active X-band radar. It entered service in the late 1960s. The AS-6 was a fast sea-skimming cruise missile with an active radar terminal seeker that entered service in 1973.
- 42 The KARA CGs entered the fleet in 1973. It carried eight SS-N-14 SSMs and both SA-N-3 and SA-N-4 SAMs. The KRESTA I sub-class entered service in the late 1960s and carried the SS-N-3. The KRESTA IIs entered the fleet in the early 1970s and carried the SS-N-14. The KRIVAK began entering service in 1970 and carried the SS-N-14.

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- 43 *Understanding Soviet Naval Developments*, Washington, DC: Office of Naval Intelligence, 1991.
- 44 The VIRGINIA CGs and SPRUANCE DDGs both began entering the fleet in 1972.
- 45 The E-2C entered service in 1973. The F-14 entered service in 1974.
- 46 The 688 class entered the fleet in 1972. The P-3C began entering fleet service in 1970.
- 47 The Harpoon entered service in 1976 and has a range of 67 nm.
- 48 See Richard Hooker, "NATO's Northern Flank: A Critique of the Maritime Strategy," *Parameters*, June 1989.
- 49 See *Soviet Military Power 1981*, Washington, DC: Department of Defense.
- 50 *Understanding Soviet Naval Developments*.
- 51 *Ibid.*
- 52 *ibid.*
- 53 *ibid.*
- 54 *ibid.*
- 55 *ibid.*
- 56 The TICONDEROGAs began entering the fleet in 1980, the ARLEIGH BURKEs in 1988.
- 57 *Understanding Soviet Naval Development*
- 58 The F/A-18A entered service in 1984. The ASM-135 was produced in 1984.
- 59 O'Rourke, *China Naval Modernization*.
- 60 For example, Thomas W. Wolfe describes the bureaucratic competition that pushed Soviet naval developments toward long-range surface-to-surface missiles rather than carrier-based airpower in *Soviet Naval Interaction with the United States and its Influence on Soviet Naval Development*, Santa Monica, CA: RAND, 1972. See also Michael MccGwire, *Soviet Naval Influence: Domestic and Foreign Dimensions*, New York: Praeger, 1977.
- 61 See Adam Grissom, "The Future of Military Innovation Studies," *Journal of Strategic Studies*, June 2006.
- 62 This point is made explicitly about arms races in Matthew Evangelista's *Innovation and the Arms Race: How the United States and the Soviet Union Develop New Military Technologies*, Ithaca: Cornell, 1988.
- 63 See for example, X. The intelligence community identified personnel, materiel reliability and maintainability, and logistics as major constraints on Soviet operations. These judgments were not incorporated into the assessments in the balance of the estimate, however.
- 64 Robert Angevine, "Hinding in Plain Sight: The US Navy and Dispersed Operations under EMCON, 1956-1972," *Naval War College Review*, Spring 2011, v.64, n.2, pp.79-94.
- 65 "SS-N-1 'Styx,'" and "SS-N-3c 'Shaddock,'" *Jane's Strategic Weapon Systems*, *Jane's Online*, 16 August 2010.

10. Irregular Warfare and Future War: Strategy and Defense Planning

James A. Russell

The purpose of this paper is threefold: to speculate on the role and prominence of irregular warfare in the strategic environment over the next quarter century, to comment on the impact that phenomenon may have on shaping the postulated scenarios addressed in the US National Intelligence Council's *Global Trends 2025: A Transformed World* (2025 Report), and to evaluate the relationship of this strategic environment to US defense-planning assumptions that will shape the capacities of the Defense Department to address threats to US interests over the next quarter century.

What is irregular warfare? Irregular warfare also goes under a host of other pseudonyms, such as guerilla war, insurgency, and terrorism. A cottage industry has grown over the last decade purporting to describe the modern variation of this phenomenon as a kind of discrete form of warfare. Terms such as 4th generation war, 5th generation war, and hybrid war have appeared, all with the avowed purpose of lending greater definitional specificity to term in its most modern iteration. The Defense Department's Irregular Warfare Joint Operating Concept states: "Irregular warfare is defined as a violent struggle among state and non-state actors for legitimacy and influence over the relevant populations. IW favors indirect or asymmetric approaches, though it may employ the full range of military and other capabilities, in order to erode an adversary's power, influence and will."¹

It is generally believed that in this construct one or more of the adversaries involved is using terrorism, subversion, sabotage, insurgency, and criminal activities or other asymmetric tactics.² To fight adversaries, both state and non-state, that are using these tactics the Department of Defense identifies a number of critical core competencies for organized military forces: counterterrorism, unconventional warfare, foreign internal defense, counterinsurgency, and stability operations.³

The United States and its coalition partners have been engaging in two such wars over the last decade—one in Iraq and another in Afghanistan—in which both US forces and its adversaries could be said to be engaging in irregular warfare. Senior US decision makers have stated that this is likely to be the kind of warfare confronting the United States in the future. Former US Secretary of Defense Robert Gates recently stated: "Where possible, what the military calls kinetic operations should be subordinated to measures aimed at promoting better governance, economic programs that spur development, and efforts to address the grievances among the discontented, from whom the terrorists recruit."⁴ Since the 9/11 attacks, the US invasions of Afghanistan and Iraq and the promulgation of terms like the "long war" and the "war on terror," the Department of Defense has generated an enormous amount of reports, directives, and planning and training guidance that has sought to reorient US capabilities away from conventionally oriented war toward irregular warfare, which take into account the strategies suggested by Gates.

This is for a reason—the US has been increasingly engaged in these kinds of operations since the end of the Cold War, finding itself involved in various policing and humanitarian missions over the last 20 years. The vast enterprise of the US military increasingly finds itself as the only viable government instrument in any state to carry out these kinds of missions around the world. The United States Air Force and the US Navy today constitute the most comprehensive freight service in the world; the Army and Marine Corps can be moved to virtually any part of the world courtesy of

this global logistics and freight-forwarding network. No other state in the international system possesses such organizational capacities.

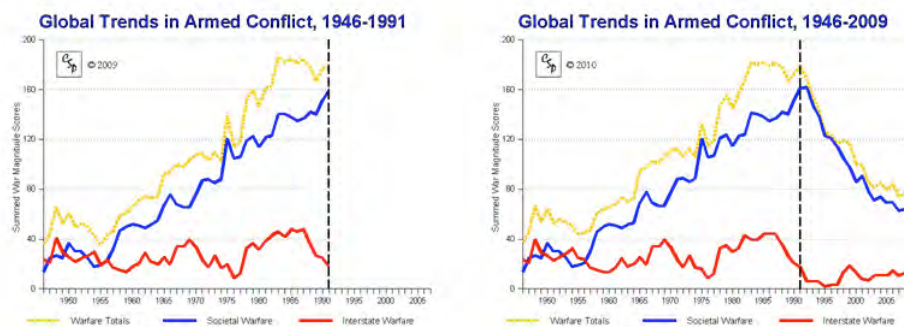
Predicting the future nature of war is impossible, but it is not so difficult to draw inferences from the current strategic environment. These inferences can then be used to draw some speculative conclusions about the prominence of irregular warfare in the strategic environment in the next quarter-century.

Today's strategic environment⁵

As previously noted, the international system remains characterized by persistent conflict, albeit at reduced levels since the end of the Cold War. Without prejudice to the postulated scenarios identified in the NIC's 2025 Report, we can predict with some certainty that the future strategic environment will flow from trends in the current strategic environment. The trends in global warfare are reasonably well known and are well documented by rigorous empirical research. These trends seem relatively predictable and overwhelming: to change them would require some kind of systemic global shift. It is unlikely that the world will somehow see a dramatic change in the frequency and types of wars over the next quarter-century.

As indicated in Figure 1 below, there has been a decline in interstate war since 1990. The decline in interstate warfare since the end of the Cold War has been nothing short of remarkable. There is today an absence of war between developed states, which have decided the consequences and costs of war do not warrant the generalized use of force against each other either to solve disputes or to increase influence over friends and rivals. It is increasingly unlikely that the world will see a reemergence of wars like the Franco-Prussian war of 1870-71. Rather, to the extent that states go to war, the 1973 war in the Middle East may have been a forerunner of the future, where a state applies limited use of force for the purpose of achieving a favorable negotiated settlement. This does not mean that developed states will not go to war with each other in the future, but it does suggest that, in terms of planning assumptions, this is a much more remote possibility than other forms of warfare.

Figure 1: Global Trends in Armed Conflict

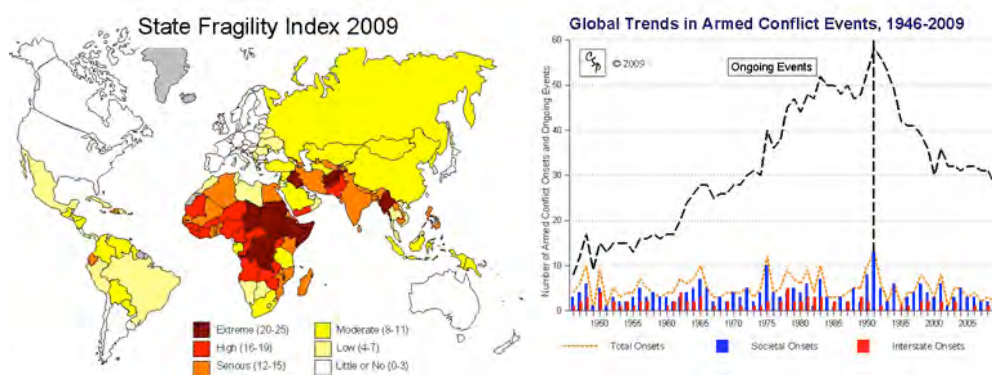


Additionally, warfare in today's international system is statistically much more likely to be intra-societal and ethnically organized in nature. Since the end of the Cold War, while the numbers of inter-state wars have fallen, intra-societal and ethnic wars have remained more or less constant. Overwhelming incidences of use of force over the last 15 years have involved ethnic or intra-societal conflict in many parts of the world: Shaped by political disputes, we have witnessed multiple attempts at ethnic separatism through violent means and clashes created by Islamic militants pursuing an anti-globalization and anti-modernity agenda. These wars tend to involve actors waging what could be characterized as irregular war in that the war is not waged between organized state-based militaries.

Behind the numbers, there are trends that bear highlighting for the purposes of this analysis. Trends in the early 21st century indicate that downward trends of certain kinds of armed conflict may be leveling off. Another way of looking at this is to suggest that *there may be a persistent background "clutter" of war that we can expect to continue for the foreseeable future*. Today there are 11 protracted societal conflicts in the world that have lasted more than a decade and which seem to defy efforts to solve them. These include conflicts in Afghanistan (30 years), Colombia (33), D.R. Congo (16), India (56), Iraq (28), Israel (43), Myanmar (60), Nigeria (11), the Philippines (36), Somalia (20), Sudan (25), Turkey (24), and Uganda (37). Sri Lanka only just ended its protracted war with ethnic-Tamil separatists in 2009 after 26 years of fighting. On average, during the contemporary period, interstate wars lasted about three years, civil wars lasted just over five years, and ethnic wars lasted nearly 10 years.

The other salient feature of today's environment is that we have a statistically good chance of predicting where wars will be. Over the last 20 years wars have tended to occur in the lesser developed countries, areas that lack strong governing institutions and a correspondingly strong sense of state identity, and places with existing ethnic and/or societal tensions. As shown below in Figure 2, *there is a high degree of correlation between the likelihood of armed conflict and state fragility*. The eight most "fragile" countries today are all experiencing armed conflict of some kind or another (Somalia, Congo, Chad, Sudan, Afghanistan, Iraq, Burma, and Ethiopia). This is not a coincidence.⁶

Figure 2: State Fragility and Armed Conflict



Other shaping factors

There is also a correlation between a state's ranking on the state fragility index and the absence of strong states with established standing armies. In other words, weak states tend not to have standing

armies waging more conventionally oriented military operations. Over the last ten years, the world's zone of "turbulence," so to speak, has remained relatively constant. This zone of turbulence has been in parts of Africa, Central and South America, South Asia, and the Middle East. It seems reasonable to predict that warfare over the next quarter century will overwhelmingly occur in this zone and that this warfare will not be conducted by organized militaries insofar as conflict involves the actors in these parts of the world.

Another prominent feature of the environment likely to shape the character of war over the next quarter century is the precipitous decline of power-projection capacities of conventionally structured standing armies around the world. This means the capacities of states to engage in conventional war, in which standing armies engage in protracted military operations in distant places, is likely to be reduced. It is also not unreasonable to suggest that over the next quarter century, developed and developing states may follow the lead of Europe and start spending less on defense with a resultant reduction in the sizes of their conventionally structured militaries. Global defense spending reached an estimated \$1.6 trillion in 2010, an increase of over 50 percent since 2001. The United States is mostly responsible for this increase in defense spending in the aftermath of the 9/11 attacks; 15 states accounted for over 80 percent of global defense spending in 2010.⁷

While defense spending is increasing in much of the developing world, militaries in the developed world increasingly are focused on border and internal security. Armies of the developed world have generally followed in the path of their sister-service navies, which are now largely comprised of coastal-patrol and coast-guard forces.

There are several interesting illustrative examples of large standing armies in the developing world that have invested heavily in their land forces, including Saudi Arabia, Egypt, Turkey, and Iran. In each of these cases, however, the large numbers of personnel in uniform have not created credible conventional military capabilities. Both Saudi Arabia and Egypt have heavily invested in their air forces and have acquired new and sophisticated equipment, but remain unable to use them on the battlefield. A characteristic of militaries in the developing world is that regimes tend to not actually want their militaries well trained for fear of potential threats to the regimes. In countries like Turkey and Egypt, for example, the militaries are seen as pillars of social and political stability, not as power-projection instruments to influence adversaries or friends.

More generally, outside the United States, the number of competent conventionally structured armies is limited and is likely to decrease over the next quarter century. Western European militaries are in decline due to political decisions to decrease the size of their armed forces and may cease to be able to conduct even policing missions in the future. Outside Europe, Columbia, Israel, and Pakistan have militaries engaged in continuous operations. China and India both have large standing armies, but their ability to move these forces over great distances for extended periods of time is virtually nonexistent. This paper postulates a generalized decline in the abilities of conventional militaries around the world to conduct sustained operations. It is not that large standing armies will go away in these states, since they are institutions that perform important political and social functions in these societies. But, sustained conventional warfare will not be among the principal functions of these organizations.

It is also worth noting that the zone of turbulence that seems likely to remain with us is largely confined to littoral areas. Stated differently, those engaging in war will be on land, not at sea. The world's maritime domain has statistically never been safer. While the global economy is still recovering from the downturn of 2009-2010, and despite episodic and well-publicized incidences of piracy off the Horn of Africa, economic growth has resumed.⁸ The global level of twenty-foot

equivalent unit (TEU) container traffic tripled between 1996 and 2009 (from 137 to 432 million TEUs), and it is expected to continue to grow.⁹ One projection forecasts a growth in traffic to 731 million TEUs by 2017.¹⁰ As the world's seaborne trade continues its exorable climb, developed states in particular will continue to police critical waterway chokepoints. These waterways are policed by a diverse collection of formal and informal naval task forces. The stakes of developed states in the orderly functioning of the globe's maritime domains are overwhelming and are likely to motivate them to continue these policing functions.

To be sure, there are additional important factors shaping the strategic environment that could change the ways in which states view their militaries. These include perceived changes in global balances of power that affect actor calculations on military spending and use of force; the transfer of wealth from West to East that could change decision making around the world; and the rise of China and India economically and politically, both of which have large standing armies and conventional military capabilities. There is also the decline of the US in relative terms to China and India that may cause regional states in South and East Asia to increase the size and competence of their armies and the decline of European militaries to handle anything other than peacekeeping operations. Other systemic-level variables induce additional layers of unpredictability, including population growth, unforeseen developments in global markets (financial, energy), environmental climate-change stresses, other sources of global competition for resources such as energy, water, and other stressed and vital commodities. All these additional shaping factors point to the prominence of irregular war as a form of global conflict over the next quarter-century.

Defense Planning Assumptions

The factors shaping the strategic environment over the next quarter century suggest that this period will not look dramatically different than it does today. Intra-state and societal conflict will prove a persistent feature of the international system while interstate conflict is less likely. These forms of conflict will likely occur in what is today's zone of instability (turbulence) and will take the form of irregular warfare conducted by state and non-state actors vying for power and influence. The actors engaged in these struggles all have objectives, regardless of the tactics used. They will likely rely on the tried and true tactics and equipment of the past. In other words, conflicts over the next quarter century will look much like they have looked over the last 15 years, and they will not emphasize mass destructive weapons and technologies or cyber warfare.

Despite the continuity, this suggests an alternative future scenario in which the international community will increasingly have to rely on the United States for policing actions in this zone of turbulence. While, as postulated by the NIC, there will be a political "concert" of powers that will provide a supporting backdrop, these powers will become steadily less capable of exercising military influence within this zone. Influencing events in these zones of turbulence will organizationally fall to the United States. Over the next quarter century, the United States is likely to remain the sole state capable of using force in the unstable parts of the world as referenced above: Africa, the Middle East, and parts of Asia.

The United States is systemically reorienting its military institutions away from predominately conventional military operations to meet the challenge of irregular warfare. The political leadership within the US Department of Defense over the last decade has made a concerted effort to direct its military departments to develop irregular warfare one of its six main mission areas. Myriad reports, directives, new doctrine, new organizations, and additional funding have been committed to the

effort. The 2009 *Quadrennial Roles and Missions Report* established irregular warfare as one of the six critical core mission areas for the Department of Defense.

Top-down direction from the civilian leadership to the executing elements in the military departments has helped build new organizational capacities over the last decade. The land force today has new doctrine and training not to mention a huge reservoir of experience over the last decade in fighting irregular war. Moreover, both the US Navy and Air Force have played strong supporting roles in supporting littoral operations. The Air Force has produced new doctrine designed to build organizational competency in irregular warfare. The Navy established the Navy Expeditionary Combat Command in part to consolidate its organizational elements engaged in irregular warfare operations (Seabees, Riverine, and the like).

As repeatedly noted by senior civilian leaders like Secretary Gates, however, persistent doubts remain over the institutional commitment in the military departments to the irregular warfare mission. The institutional preferences for the military departments remain predisposed for conventionally structured military operations. Their budgets – the true measure of institutional interest and intent – remain focused on equipment intended for conventional war. The entrenched institutional interest in fighting conventional war is, in some ways, more powerful than the ever-changing civilian management structure that attempts to provide managerial direction. Stated differently, institutional and bureaucratic interests are longer-lasting than their ephemeral civilian political masters who lack the staying power to take on these entrenched interests.

Despite the myriad top-down directions from political leaders proclaiming the dawn of a new strategic environment oriented toward irregular warfare, that leadership has shown little interest in aligning the overall budget with the capabilities needed in the supposedly new environment. As argued in this paper, irregular wars over the next quarter century will be on land, yet the Defense Department budget remains roughly equally divided between the Navy, Army/Marine Corps, and Air Force. This rough equivalency in budget share has been a constant in the Defense Department's budget in the post-World War Two era. Civilian political leaders have either been unwilling or unsuccessful in reorienting this budget to be better aligned with the strategic environment. The Navy's budget is overwhelmingly driven by its preference for carrier battle groups; the Air Force's budget is driven by its institutional interest in high-performance aircraft. The US Congress has been a supporting element in this complex equation, converging to prevent the systemic realignment of US defense capabilities. The Congress has successfully shoehorned expensive equipment into the Defense Department's budget that bears a tangential relationship to likely real-world military requirements.

In addition to organizational and institutional factors affecting US capacity to wage irregular war, domestic politics will continue to strongly influence whether and/or how often the United States commits its forces to these kinds of operations. The wars in Afghanistan and Iraq must be seen in the context of a decision-making environment shaped by the 9/11 attacks and do not represent some sort of sea change in American politics that represents a broad embrace of a more general policing responsibility. Domestic politics, which undergirds foreign-policy decision-making, has, if anything, become more fractious in the last decade. The centrist domestic political coalition that supported a relatively consistent foreign-policy decision-making calculus throughout the Cold War and its immediate aftermath has largely vanished. This induces yet another uncertainty that makes any predictions about America's propensity to commit its forces to far flung conflicts around the world more difficult.

Certainly the last decade of war in Iraq and Afghanistan has led to a certain institutional fatigue that will affect the willingness of military departments to make additional long-term commitments. This institutional fatigue, in combination with national fatigue and a changed domestic political environment, may make the United States even less interested in applying force in general policing missions that are likely to surface over the next quarter-century.

Conclusions

This paper argues that warfare in the next quarter century will bear a strong relationship to the wars of today in their type, frequency, and location. These wars will occur in the world's zone of turbulence characterized by weak states and enduring political and/or ethnic and societal disputes. Inferences from current data suggest that irregular war will be a persistent phenomenon in parts of the world that are well known to us. The phenomenon of persistent irregular war will be further reinforced by the general decline of large conventional armies capable of power projection or sustained operations of any kind other than border and internal security.¹¹

This paper further argues that the United States is likely to remain the world's only power capable of conducting sustained military operations in the zones of instability but that it faces institutional and political challenges in intervening militarily. This suggests that the parts of the world that are today prone to instability and irregular warfare are likely to remain so for the foreseeable future.

¹ Irregular Warfare Joint Operating Concept, Version 1.0, Department of Defense, 11 September 2007. Also See Department of Defense Directive 3000.07, *Irregular Warfare*, December 1, 2008.

² *Irregular Warfare: Countering Irregular Threats*, Joint Operating Concept, Version 2.0, 17 May 2010, Department of Defense, Washington DC.

³ Ibid

⁴ Robert M. Gates, "A Balanced Strategy: Reprogramming the Pentagon for a New Age," *Foreign Affairs* (January/February 2009).

⁵ All data from the following section drawn from "Global Conflict Trends," Center for Systemic Peace, Severn, MD; posted online at <http://www.systemicpeace.org/conflict.htm>

⁶ Monty G. Marshall and Benjamin R. Cole, "State Fragility Index and Matrix 2009," Center for Systemic Peace, Severn, MD, posted online at <http://www.systemicpeace.org/SFImatrix2009c.pdf>

⁷ "Recent Trends in Military Expenditures," Stockholm International Peace Research Institute, posted online at <http://www.sipri.org/research/armaments/milex/resultoutput/trends>

⁸ The United Nations projects global growth of 3.5 percent in 2010; *Review of Maritime Transport 2010*, Report by the UNCTAD Secretariat, United Nations, New York and Geneva 2010.

⁹ See "Long Term Trends in Container Throughput," Research and Innovative Technology Administration, US Department of Transportation, Washington DC; posted online at http://www.bts.gov/publications/americas_container_ports/2011/html/long_term_trends.html

¹⁰ A report by Global Industry Analysts, "Global Maritime Containerization Market to Reach 731.8 Million TEUs by 2017," posted by MACOR Shipping, April 7, 2011 at <http://macorship.blogspot.com/2011/04/global-maritime-containerization-market.html>

11. African Conflicts in the Early 21st Century

G rard Prunier

Africa was decolonized between 1956 and 1975, with the bulk of African states reaching independence during the 1960s. Since then, Africa has become—and remains today—the most violence-prone of the five continents. In spite of that fact, African wars are often understudied and considered negligible. When the Rwandan Genocide burst upon international attention in 1994, few people seemed to realize that it was the consequence of a war that had been going on for three-and-a-half years. And when a war involving 14 states eventually broke out in central Africa in 1996 as a result of that genocide, and lasted six years, it barely seemed to affect international opinion, even though it was the most murderous conflict since World War Two. A terrorist attack in Europe or Israel immediately makes the headlines even if only a handful of victims die. But hundreds or even thousands can die in Africa without making it to the front pages of newspapers. This is due to a mixture of racism, lack of perceived strategic significance, and cultural isolation. But all these factors are now changing, and African conflicts in the future will tend to become more and more relevant to the way the world works, and how it looks at itself.

In this essay we will be placing ourselves in a perspective where, out of the four possibilities outlined in the NIC's *Tomorrow's Security Challenges: The Defense Implications of Emerging Global Trends* report, we will consider a combination of two of the global trends presented: *a rise in non-state networks* and *a fragmented international system*. The one scenario we cannot see as relevant overall is the concert of powers, a choice it would take too long to justify within the framework of such a short paper. As for the possibility of seeing a return to great power confrontation, even though it may be a more realistic systemic possibility than the emergence of a global concern, it is hard to foresee significant great power confrontation arising in Africa. The emerging powers, particularly China, will not fight for Africa. Even if this trend occurs—and we cannot see it *dominate*—it will most probably create conditions similar to those of the 19th century. The Soviet Union's Vladimir Lenin was sure that an inter-imperialist war would come out of colonial competition in Africa.¹ It did not, and when the great inter-imperialist war came, it came out of a *European* confrontation. If renewed great power rivalry were to bring about a major military confrontation in the 21st century, the trigger is much more likely to be found in the Middle Eastern or Asia than in Africa.

The way it used to be

African conflicts in the 20th century started from a combination of causes, some of which were specific to the continent, while others pertained to the Cold War environment. Specific causes had to do with:

- Administrative and political weakness of the states.
- Absence of a coherent, long-standing national cohesion, the African “countries” being, in fact, arbitrarily cut chunks of the continent, parceled out according to prevailing relationships among the colonizing powers.
- As a consequence, the main problem was the coexistence of tribes with varying degrees of access to modernity (depending on colonial policies), different size, different cultures and economic

weight, leading to the dominance of some of them over others and to the exacerbation of previous relationship of hostility or exploitation. A common “national” good was an abstract notion. There was the good of one’s tribe and, within that precinct, the good of one’s clan or family. The “nation” remained an abstract point of reference, used in dealing with the non-African world.

- This situation of institutional weakness and lack of coherence was exacerbated by the fact that politics, i.e., the control of the state apparatus, was the only way to achieve riches and status. There was no entrepreneurial class worth the name (only traders) and, even for those in business, the state was the key factor to obtain foreign currency, lucrative public contracts, and preferential access to raw materials. The state was the key to everything and, as a result, fighting for its control was the main concern of politics.
- Politicians with a realistic view were few and far between. Those who had one were, in general, anti-colonialist ideologues who resented the short shrift their communities had been given by the former colonial masters. They tended to point the politics of their new countries toward an “anti-imperialist” line hostile to both the US and the former colonial powers alike.
- Because of colonial education policies, the public had been kept broadly ignorant of political issues. It was, therefore, easy prey for demagogues and military dictators, such as Idi Amin Dada and Bokassa. Rational politicians, such as Julius Nyerere and Tom Mboya, had a hard time.
- As a result, most African wars, if not all, until the massive Central African Wars of the 1990s, were civil wars.

All these factors played out against a Cold War background. Local quarrels were immediately probed to see who was a “Communist” or Communist ally, which were considered the same, and who was “a friend of the West.” As a result, the strangest judgments were passed. Patrice Lumumba was dubbed a Communist because he was anti-colonialist and the US saw Belgium as a close and necessary ally, while Joseph-Désiré Mobutu was toasted as a “friend of the West” in spite of his brutal and thieving dictatorship. France supported a series of abominable dictators because they were *des amis de la France*, and France had been subcontracted for the anti-communist control of Francophone Africa by the United States. Conflicts in such cases—or political repression, two sides of the same coin—were practically on automatic: the pro-Western camp being awarded immediate support by Paris or Washington while Moscow supported the “anti-capitalist” side. “Anti-imperialism” could produce strange policies on the Soviet side as well, such as praising Somali dictator Siad Barre for his “socialism” when he did not know what the word meant, and supporting General Idi Amin Dada for his alleged “anti-imperialism” when he expelled the Indian communities from Uganda.

As a rule, African conflicts were rooted in local problems and grievances (about which neither the West nor the Communists usually had any clear understanding), and tended to escalate, or at least continue unabated, as the contestants sought to align themselves with one side or the other in the Cold War as a means of seeking outside support. There were some ambiguous cases, such as Nigeria’s Biafran war of the late 1960s, where Great Britain and the Soviet Union ended up as uneasy allies of the Federal Government, while Portugal and France supported the secessionists.² But such ambiguities tended to be the exception, not the rule.

Such conflicts achieved no lasting results because they were linked to, and partially caused by, ineffectual development policies. These kept the tribal gaps open, did not provide African societies

with power bases independent from the state, and kept the local economies subject to foreign interests. These acted as boosters to the state's interests, therefore making its conquest all the more attractive.

Grand ideological narratives acted both as camouflage and as mobilizing factors for the fighters and for their civilian constituencies. The conflicts were deeply local, even at times sub-national. They typically involved large numbers of combatants. Most conflicts were financed and equipped by one of the two Cold War blocs or by their local proxies. The weaponry tended to be relatively simple or even makeshift. The media provided very little coverage for these conflicts, which, in contrast to conflicts in Asia, Latin America or the Middle East, did not usually inflame world opinion. The protracted civil conflict in South Africa, which never broke into open warfare, was the only one that proved capable of mobilizing Western public opinion, because one of its contending parties was white and could thus provide a locus for foreign identification, be it "the defense of freedom" (US) or "the brutality of racism" (USSR).

The new dispensation

The end of the Cold War had a massive impact on African conflicts. After 1989, the rules of the game changed:

- The one-party state, which had been the rule whether it dubbed itself "progressive" or promoted a form of right-wing Leninism, suddenly became obsolete.³ "Democracy" became the order of the day and, just as the one-party state had mimicked Bolshevism, new systems appeared to be mimicking Western multi-party democracy. But this was without any of the social, economic, or cultural factors actually underpinning democracies elsewhere. The Rwandan Genocide was one of the unwarranted consequences of this "democratization without a democratic base."
- Fitting this new political dispensation, human rights became a new ideological norm. The human rights bandied about by the "new democracies" often had no more reality than the "socialism" previously displayed by "progressive" regimes. But a ritual homage was now paid to the concept of elections, even if they were flawed and even if the contenders did not represent any clear democratic alternative to whomever they were pitted against.
- Democratic paraphernalia, especially when it was used by a regime that had recently replaced an obviously autocratic one, was often sufficient to gain worldwide acceptance. The conflicts of these new "democracies" with either their internal opposition or their neighbors, were usually looked upon with benevolence by Western opinion. When these "new democracies" violated the dominant human rights ideology, they tended to be only mildly reprimanded. Rwanda under President Paul Kagame became a prime example of this aspect of the new dispensation.
- Grand narrative ideologies, usually a variety of socialism but at times hyper-nationalism or some form of ethnic fundamentalism, waned and faded away.
- Open declarations of ethnicity as a political marker started to regress, due to the unifying influence of modern media and growing urbanization. But where it persisted, it did so under the guise of "pride," "roots," and "cultural heritage," an Africanized version of political correctness. Post-Apartheid South Africa exemplified this trend.

- Conversely, the importance of religion grew, particularly in the case of Islam. But this trend also affected Christianity. Protestant fundamentalism, often supported by US churches, began to challenge both Islam and older established forms of Christianity. This has particularly been the case in Ethiopia where the Pentacostal churches bit deeply into tāwahādo “orthodox” territory. Religious violence grew apace.
- Syncretic cults and witchcraft movements (re)appeared, recycling elements of larger religions into a semi-coherent body, allowing them to win or browbeat converts and marshal them to action. The best-known example of this phenomenon is the notorious Lord’s Resistance Army, an initially Ugandan cult, whose members later migrated to Southern Sudan, the Northeastern Congo, and finally the Central African Republic.
- The media started to cover African conflicts a bit more seriously, though global coverage remained far behind that of contemporary wars in the Middle East or South Asia.
- As a result of this deeper coverage, it became possible for smaller armed groups to have an influence far beyond what their numbers would otherwise have allowed. Guerilla movements were re-designated as “terrorist groups,” i.e., the case of the Afar and the Somali in Ethiopia, as were bandits with a thin ideological veneer, such as al-Qaida au Mahgreb Islamique (AQMI) in the Sahel. Given the American fixation on terrorism following the attacks of September 11, 2001, “terrorist” became an oversimplified, catch-all category in which to fit armed movements nobody understood too clearly. African states lobbied to get their enemies put on the terrorist list in order to attract additional aid, while rebels accused states of carrying out repressive policies against so-called terrorists. The net result has been a general overestimation of the relevance of terrorist attacks, such as the May 2011 bombing in Marrakech, Morocco.
- These smaller armed movements, at times, still had foreign sponsors. But the acceleration and greater ease of transport, even in very remote places, enabled the movements to capitalize on local natural resources. The new global market provided them with ready customers who could operate through various shadow companies and recycle their money in tax havens. Armed movements patterned their logistics on those of the drug gangs and, at times, the two could meet. This gave armed movements a degree of freedom from foreign sponsors that they had not previously enjoyed and also made the complete mavericks more dangerous, since they did not have to satisfy the minimum requirements of organizing around an ideology or political stance.
- The spread of information technology also allowed for greater coordination between disparate groups that could make, or later break, tactical alliances with an ease their forerunners did not enjoy.
- The role of popular feeling in political mobilization increased even as use of ideological frames decreased. This emotional attraction was a raw, gut product of a world, which was trusting political philosophy less and less and feelings more and more. Popular feeling tended to be re-packaged as human rights and in cultural terms, which substituted for the obsolete ideology/ethnicity previously used. The transformation of the militant Oromo Liberation Front in Ethiopia over the years is very revealing from is point of view.
- These lighter and more nimble forms of conflict opened up avenues not previously used for violent action, such as hostage taking, sexual violence, and the displacement of refugees. These forms of action depended on media coverage, which would not have been afforded previously,

but which was now more readily available for these violent repertoires than for “classical” armed action, both because of a shift in contemporary sensibilities toward a greater concern with human rights made them more distasteful for public opinion, and because they were less dangerous for the reporters covering them.

- Low-technology weapons persisted and became even more readily available than they had been in the past, since transport was easier and the former USSR, in economic ruins in the 1990s, provided a cheap and almost unlimited supply of small arms. High-technology weapons wielded by better-equipped armed forces only had a moderate advantage over their older counterparts, because they were (a) expensive and, therefore, less easily available; (b) fragile, hence dependent on a sophisticated chain of maintenance not readily available in Africa; and (c) complicated to operate properly, thus not easy to pass on to friendly local militias, whose members were often technologically illiterate.

But a number of features persisted:

- The African continent’s balance did not grow any stronger. Some of its technological and administrative capacities were strengthened. But this was more than offset by the rise in power of non-state actors, such as religious groups, civil society organizations, ethnically organized militias, opinion pressure groups, and bandits, which increasingly usurped the powers of the state. Some were still practicing the old game of trying to remove the state and replace it with their own power. But others preferred to take the shortcut of acquiring wealth, power, and privilege directly, rather than using the peripheral and more complicated road of regime change.
- As a result of persistent state weakness, salaries were often not paid to the agents of the state, thereby facilitating the challenges non-state groups could pose.
- Africa’s armed forces tended to remain unprofessional, undertrained in the use of modern weapons, and politically divided in their loyalties. It, accordingly, remained difficult for the state to retain its monopoly of legitimate violence, since it possessed neither the legitimacy nor controlled the violence. The worst Africa case today is probably the *Forces Armées de la République du Congo* (FARDC), the DRC’s “army.” This force is probably more dangerous to its own population than several of the non-state actors it is supposed to fight in the Kivus.

The global overview

It is clear from what we have just read that the dominant situation in Africa is likely to be the continued growth of non-state networks, which would be made easier by a fragmented international system. The Central African wars may prove a portent of things to come, and are a perfect example of this situation.⁴ For all its appetite for African raw materials, China is unlikely to fight a big international war over them.⁵ Rivalry over raw materials is likely to remain muted and under the horizon, mostly because the African states do not have the capacity to become autonomous enough to force the hand of their protector/driver/minder, as do, at least, some states in Asia and the Middle East.⁶ As a result, atomization and localism will remain characteristic of African conflicts. And solutions, to the extent that they exist, *will remain extremely specific*. There cannot be a one-size-fits-all approach to African warfare. But some recommendations can be made here for the benefit of US forces.

- For use in Africa, US forces are over-equipped and too heavy. Their logistics are enormous and preclude use in heavy terrain. In many ways, operations would be easier if their gear was closer to what was used in the Pacific theater during the Second World War or even the Vietnam War.
- Conversely, US forces are politically and culturally underprepared. Their behavior often grates on local sensibilities, particularly in Muslim-majority areas. A volunteer army should allow for better preparation for operations in culturally different terrain.
- Mobility in Africa is very much the heart of the matter, particularly when faced with an enemy that neither looks nor feels like a conventional army, i.e., the case of AQMI in the Sahel or what could have happened in the case of an intervention in Darfur, where the janjaweed looked like “normal” camel nomads.
- Mobility in Africa means good, old-fashioned mobility on foot. Helicopters are fine for combat support but not for transport where their noise is too easily detected from a great distance. In many ways, African warfare is and will remain archaic for the foreseeable future.
- Cultural adaptation to the context on the ground should not only be defensive, it should also allow for the possibility to use the counterforce of groups that are opposed to the ones the US is fighting. But such choices have to be thoroughly investigated. The April 2006 CIA-sponsored coup in Somalia, supporting a highly unpopular warlord alliance, was a massive error that was due to a poor assessment of the internal political situation in that country. Incorrect analysis, in turn, was due to poor intelligence gathering.

In any case, African situations will remain a secondary feature on the world stage. No African country is equipped with nuclear weapons, and no African country has the capacity or the will to brutally intrude on the world scene and use a form of violent blackmail to bend local geopolitics to its desired views. The one form of quasi-violent tactics Africa could use to capture the world's attention is disease epidemic and/or migrant invasion. Disease and the migration of masses of poor people could be considered Africa's nuclear bombs. HIV-AIDS came out of Africa, and the present North African revolutions-cum-civil-wars triggering large refugee flows are viewed as a direct threat to the northern Mediterranean shores.⁷ But, can we see these threats as likely to be managed by a hostile political force or are they just the uncontrollable consequence of political spontaneous combustion? In many ways, such threats are closer to natural catastrophes than to warfare as normally understood.

¹ He based this view on events such as the Franco-German tension over Morocco and the near-war situation after the Fashoda incident in the Sudan in 1898.

² When the Federals won, they chose to ally themselves solidly with the US.

³ The ideal type of right-wing Leninism had been Mobutu's MPR.

⁴ See Gerard Prunier, *Africa's World War: Congo, the Rwandan Genocide and the Making of a Continental Catastrophe*. Oxford University Press America. 2009.

⁵ Beijing's attitude concerning the 2011 Southern Sudanese secession is typical of this.

⁶ No African country, not even South Africa, has the capacity for dangerous autonomy displayed by Israel, Iran, Pakistan, or even Afghanistan.

⁷ Back in 1987, when working in the presidential African unit in Paris, I heard then-Senegalese President Abdou Diouf voice this possibility, adding bitterly that, given Africa's weakness, this was its last weapon.

12. 21ST Century Peacekeeping and Future Warfare

Efrat Elron

The UN was designed not to bring humanity to heaven but to save it from hell.

Dag Hammarskjöld

There is a vast, sensible middle ground between those who see the United Nations as the only hope for the world and those who see in it the end of the world.

Madeleine Albright

In an interdependent and interconnected world values can represent interests. The reality is that they are not polar opposites. We have an interest in peace process and it is in our interest, but it will not succeed in assisting if its not based on values. Helping people is a moral cause but also in our long term interest, otherwise we will find that part of the world is turned against us. And problems never stay fixed in one part of the world

Tony Blair (Jerusalem, 2011)

Two distinct worlds of international security have emerged in the post-Cold War era: that of US power and that of international institutions. It is “a story about the changing nature of power, and of careful adaptation and surprising innovation in international governance” (Jones, Forman, & Gowan, 2010). Conflict and cooperation among states on matters of peace and security have been increasingly managed, regulated, or implemented by and through multilateral security institutions. The most visible manifestation of this evolution in the practice and form of international politics has been the vast expansion of the work of the UN Security Council; the enormous expansion of tools such as international mediation, peacekeeping, and post conflict operations to manage civil wars; the proliferation of new instruments for tackling conflict and security challenges; and new mandates for older institutions to adapt themselves to changing security realities (Jones, Forman, & Gowan, 2010).

While different in their responses, peace and stability operations are embedded in similar environments and face some similar difficulties. The majority of UN peace operations are embedded in complex intrastate conflicts, corresponding with terms such as “wars amongst people” and “irregular warfare” (the latter rarely used by the UN stakeholders). These deployments, then, face warfare that is non-linear, complex, and about “winning hearts and minds,” Hence, a significant part of their role is to create conditions for political solutions, on the one hand, while putting an emphasis on force protection and not only mission accomplishment, on the other (Dandeker, 2009). In possible future scenarios, the US will benefit from a deeper knowledge of the parallel world of international institutions and their efforts at keeping and making global security and peace.

This paper will focus on peacekeeping operations as a form of intervention by the international community over the next 15 years. Like it or not, it may fall to the United Nations and the international community to keep the international system from descending into more generalized armed conflict. This presents an initial overview of recent of peacekeeping and peace operations, areas in which militaries from around the world play a crucial role. It will conclude with recommendations for US policy makers on how to better understand, cooperate, and enhance these tools, making the two worlds of international security less separate, arguing that they are mutually dependent for better managing the transition from warfare and conflict to stability and peace.

Recent UN peacekeeping initiatives

The first months of 2011 brought with them several momentous events that signify possible important trends in multilateral peacekeeping-related efforts. Notable are the new interim peace operation in Sudan's Abyei region, military intervention in Libya, and the peace operation in South Sudan. All involve the UN as well as other global and regional organizations trying to develop innovative solutions to reduce the threat of conflict to civilians. The multilateral efforts to assist Haiti after the 2010 earthquake is a lesson learned in the success of new strategies of US military cooperation with a UN peacekeeping force as well as a multitude of partners on the ground. Reading into these seemingly separate events is a valuable way to understand the most recent thinking, doing, and un-doing of multilateral institutions in their efforts to enhance global security, to estimate the main trends related to their future participation in warfare, and to assess the US ability to best partner with peacekeeping operations and the organizations responsible for them.

On June 27, 2011, a novel and temporary conflict-management mechanism was set in place for the Sudanese Abyei region, combining national, regional, and global initiatives and capabilities. The UN Security Council (UNSC) unanimously approved a US-drafted resolution authorizing the deployment of 4,200 Ethiopian troops to this disputed hotspot for a six-month period. The resolution establishes a new UN peacekeeping force—the United Nations Interim Security Force for Abyei, or UNISFA. Abyei has been the scene of heavy fighting, forcing tens of thousands of people from their homes in the weeks preceding the June 19, 2011, agreement between the two sides on the need for a third party to monitor the area as they pull out their forces. The agreement was mediated by Thabo Mbeki, the former South African president, and overseen by the African Union (AU). Acting under Chapter VII of the United Nations Charter, the UNSC authorized UNISFA, within its capabilities and its area of deployment, to take the necessary actions to protect civilians in the Abyei area who are under imminent threat of physical violence. It also authorized the use of force to protect the area “from incursions by unauthorized elements,” as defined in the agreement between the parties. The resolution further charged the interim force with facilitating the delivery of humanitarian aid and the free movement of relief workers in and around Abyei. When necessary, and in coordination with the Abyei Police Service, UNISFA troops were also asked to provide security for the region's oil infrastructure.

While usually it takes at least three months for UN peacekeepers to deploy, an advance force of some 1,300 Ethiopian troops were expected to be on the ground in Abyei before July 9, 2011, the day South Sudan received its independence through secession from Sudan. An issue for the Security Council will be how the precedent of establishing a peacekeeping mission around a sole troop contributor from a neighboring state may affect command and control and leadership requirements and, in the future, the relationship between peacekeeping operations and host governments in other situations. While South Sudan's situation is unique, it has been the way the African Union has

chosen to guide the process. (Security Council Report, Update Report No. 3 on Sudan, 17 June 2011).

Three months earlier, on March 17, the UNSC passed Resolution 1973 (UNSCR 1973) on the response to the events in Libya. It was the first time that the term Protection of Civilians (PoC) was used as the primary stated objective in a non-consensual intervention, rather than its previous use for consent-based peacekeeping missions. The resolution authorized Member States “to take all necessary measures... to protect civilians and civilian populated areas under threat of attack...while excluding a foreign occupation force of any form on any part of Libyan territory....” Two days later, a coalition including the United States commenced attacks via aircraft and missiles on Libyan military targets. The US-led attack was later transferred to NATO Command, continuing with Operation Unified Protector.

A day before, US Secretary of Defense Robert Gates expressed his deep worries about the Alliance’s will and capabilities (Gates, 2011), noting NATO members’ widespread refusal or inability to participate in actual strike missions and difficulties in sustaining intense operations—a reminder of what the world’s most powerful military alliance cannot accomplish (Haas, 2011). US Secretary of State Hillary Clinton took part in the third meeting of the international Contact Group on Libya held in Abu Dhabi. The group, seeking a resolution to the conflict through a variety of means, included foreign ministers from 22 countries and six international organizations, including the unique combination of the Gulf Cooperation Council, Arab League, Organization of the Islamic Conference, UN, African Union, European Union, and NATO. In this unique and novel coalition, the group pledged to support a new funding mechanism set up in May.¹

In the third case of multinational cooperation in the face of a crisis is the aftermath of the earthquake in Haiti in early 2010. The humanitarian response effort included a unique partnership between the US military, Haitian government, UN, and members of the NGO community. SOUTHCOM established Headquarters, Joint Task Force (JTF), to conduct humanitarian assistance and disaster relief operations. As a few examples of collaborative work, US senior planners and leaders worked alongside their counterparts to develop detailed plans for moving internally displaced persons who were in danger, while engineers worked with the UN’s Stabilization Mission in Haiti (MINUSTAH) to identify camps in Port-au-Prince that were in direct danger of flooding and mud slides. The Humanitarian Assistance Coordination Cell facilitated this essential and early coordination and collaboration, interfacing with every facet of the joint, interagency, intergovernmental, and multinational environment to ensure synchronization, which greatly helped identify and minimize duplication of effort and other inefficiencies. Many lives in Haiti would have been lost if not for Operation Unified Response and the access NGOs had to DoD information and vice versa, as well as the joint use of online social networks, such as Facebook and Twitter, to disseminate information and correct misinformation quickly (United States Southern Command, 2010; Sodberg, 2011).

In the meantime, discussions and planning are taking place in the UN headquarters in New York on establishing a new mission to replace the UN Mission in the Republic of South Sudan (UNMISS), the current UN mission that has been monitoring the peace agreement between North and South Sudan since 2005 and which was terminated July 9, 2011. UNMISS is likely to have a military component of 5,000 personnel and a police component of around 900 officers. Its mandate will

¹ Online at <http://abudhabi.usembassy.gov/pr-2011/secretary-clinton-at-the-libya-contact-group-meeting/secretary-clinton-at-the-libya-contact-group-meeting.html>

soon be determined. At present, UNMISS staff are being screened for deployment in the new mission, yet again an innovative practice. Hopefully, this new peace operation, deployed in the newly independent South Sudan within a fragile political situation—which poses a possible threat to international peace and security and faces a government that will most probably not be able to protect civilians—will be appropriate to the threats presented and will embody a multidimensional peace operation with emphasis on PoC, Chapter VII, robust military and police components, effective leadership, and a sound and detailed strategy and campaign plan (Giffen, 2011; personal conversation, Deputy to the Special Representative of the Secretary General in South Sudan, June 26).

These recent events are important in that they may signify the dawn of a new era in the international community's attempts to regulate and control warfare around the globe. As the United States and its NATO partners retreat from their collective deployment in Afghanistan and Iraq, the international community faces the prospect of even more active involvement in addressing the consequences of persistent warfare around the world without the states best equipped to intervene militarily around the world, e.g., UK, Canada, and Australia. The ability of the international community to muster the resources and political will to address this issue will have profound consequences for the nature of warfare around world over the next quarter century.

These three seemingly separate conflicts and UN initiatives serve as an indication of the current and future trends and changes multilateral organizations like the UN and NATO are going through, as well as the possibilities and challenges they present for US policymakers in their thinking on how to best enhance national and global security. These trends include UNSC resolutions that are fine-tuned to adjust to new situations and allow a variety of uses of force, an emphasis on the protection of civilians, policymaking and defense budget cuts directed toward the limiting of military capabilities in a multitude of countries, different and sometimes innovative formats of peace operations to allow greater effectiveness in urgent situations, an emphasis on partnerships with a wider variety of government and nongovernment partners with crossing of organizational boundaries, and creating flexible forms to facilitate these partnerships. If the US, the UN, and their various partners can consolidate and capitalize upon these trends, it may suggest that the international community as a whole may be able to more effectively regulate armed conflict.

As the United States retreats from Afghanistan and Iraq, it may inevitably find itself participating in new multilateral mechanisms if it wishes to remain part of the “global police force.” Yet, for all its unrivaled power and direct or indirect involvement in the four conflicts described above, e.g., as a permanent security council member, the United States is a limited partner in the shaping of the evolution of this new multilateral security architecture. While influential in some areas and decisive in others, the United States has allowed others to drive some of the significant evolutions that have occurred. This is mostly true in the areas of “soft” security threats, largely related to internal conflict and humanitarian crisis (Jones, Forman & Gowan, 2010). The Pentagon has recently identified peacekeeping as an essential and high priority area for needed investment, yet US roles remain limited. The 2010 Quadrennial Defense Review highlights peacekeeping capabilities through a commitment to assist “partners in developing and acquiring the capabilities and systems required to improve their security capacity . . . [and enhancing] US capabilities to train, advise, and assist partner-nation security forces and contribute to coalition and peacekeeping operations.” Moreover, since taking office, the Obama administration has paid off peacekeeping arrears accumulated over the previous four years. In 2009, the United States also provided more than \$600 million in training, equipment, and logistics assistance to 55 nations to help bolster their capacity to contribute troops and police for peacekeeping operations. Dr. Susan Rice, an African expert, was made US

Ambassador to the UN and a member of Obama's Cabinet, a first for a UN Ambassador (Sodberg, 2011).

Trends in UN peacekeeping

Over the past two decades the UN has evolved into the principal instrument for the management of armed conflict. Deployment of personnel in 2011 peace operations of the UN and African Union (AU) surpassed record levels, with over 200,000 military, police, and civilian personnel operating in 16 missions in the field over the year (Annual Review of Peace Operations, 2011). Military troops from 114 Troop Contributing Countries (TCCs) are the backbone of these operations. The five largest missions, in the Democratic Republic of Congo (DRC), Timor-Leste, Lebanon, Liberia, and Sudan, account for 77 percent of total UN troop deployments. Additional forces to Sudan, Côte d'Ivoire, and Somalia reflected continuing demand for UN and regional peacekeeping arrangements. Overall, the expansion of peacekeeping operations over the last decade is a five-fold increase. At the same time, the rate of UN increase slowed significantly due to phased drawdown in stable environments, as well as diminishing and, in some cases, denial of national consent for operations, resulting in mission closure or downsizing, e.g., Congo, Liberia, Ivory Coast.

In order to perform their core functions, the significant quantitative increase in UN peacekeeping missions in the last decade is intertwined with the transformation of their qualitative profile, which can be detected in their expanded mission spectrum. Although there are continuous widespread debates regarding the nature and responsibility of peace missions operating under the UN (for a review see Bellamy, Williams, & Griffin 2004, and Hebecker 2007), on the ground these operations extend far beyond the monitoring and verification tasks of their predecessors, and their mandates are expanding on multiple horizons.

The transformation of the international environment has given rise to a new generation of multidimensional peacekeeping operations. Peacekeepers are increasingly charged with nation-building tasks, such as economic rehabilitation, democratization, building civil institutions and working police forces, humanitarian aid, and repatriation of refugees. Since 2003, UN peacekeepers have deployed to no fewer than eight complex “multidimensional operations.”

In order to help peacekeeping missions focus on their most essential goals, the 2008 Capstone Doctrine (officially titled United Nations Peacekeeping Operations Principles and Guidelines) identified their core functions: “Create a secure and stable environment while strengthening the State’s ability to provide security with full respect for the rule of law and human rights; facilitate the political process by promoting dialogue and supporting the establishment of legitimate and effective institutions of governance; provide a framework for ensuring that all UN and other international actors pursue their activities at the country level in a coherent and coordinated manner.” These core functions reflect some of the major trends in peacekeeping mirroring the trends in modern warfare, including a shift from dealing with interstate to intrastate conflicts and, hence, coping with whole states via complex lines of operation (political, security, humanitarian, developmental) and complex mandates, as well as being embedded in zones where irregular warfare is abundant.

These shifts are accompanied by the changed emphasis from UN Charter Chapter VI to Chapter VII—from observing and monitoring the end of conflicts to actively protecting civilians caught in them. Beginning in 1999 with UNSCR 1270 regarding the peacekeeping mission in Sierra Leone (UNAMSIL), PoC mandates have routinely been included in UN resolutions and typically authorize

peacekeeping forces to protect civilians from imminent violence within UN-force areas and capabilities. At the same time, the UN has yet to clarify what is meant by expressions such as “imminent violence,” “all necessary means,” or “prejudice to the responsibilities” and more specific guidelines as well as oversight mechanisms are still missing, partially because of national interests regarding its actual implementation (Security Council Report on the Protection of Civilians, 2011; Dwight, 2011). Agreement is needed as to how far these mandates should go and how compelling they are to peacekeepers.

Multidimensional peacekeeping operations usually play a direct role in political efforts to resolve conflict, because they have a high degree of international legitimacy and because the representation of the collective will of the international community gives them considerable leverage over the conflicting parties. They are also being deployed in settings considered less and less ripe for conflict resolution, where the state’s capacity to provide security to its population and maintain public order is often weak and political violence may still be ongoing in various parts of the country. Basic infrastructure is likely to have been destroyed in many of these situations while large sections of the population may have been displaced. Society may have divided along ethnic, religious, or regional lines and grave human rights abuses may have been committed during the conflict, further complicating efforts to achieve national reconciliation.

Although longer-term institution and capacity-building efforts are normally the work of development actors such as the UN, they also involve partners outside the UN that have the resources and technical expertise required to effectively undertake such missions. Experience has shown that in the short-term UN peacekeeping operations may have little choice but to initiate longer-term institution and capacity-building efforts, due to the inability of other actors to take the lead. Moreover, in the past few years, peace operations were also involved in dealing with growing transnational risks such as organized crime, as well as with assistance with security-sector issues and preventive action. Where no effective local police capacity exists, UN police (UNPOL) have assumed primary responsibility for maintaining law and order. Across all missions, they play diverse and critical roles in the effort to (re)establish the rule of law.

Challenges for the UN and possibilities for the US

UN peacekeeping has many shortcomings in implementing the complex tasks it is mandated to perform. This section is not meant to berate the existing state of play, but to point out further opportunities where the US may enhance the capabilities of this parallel and intertwined universe. A broad overview reveals that, despite overall growth and demand in deployment numbers, peacekeeping continues to suffer from political and operational challenges: overstretched resources, weak or nonexistent peace agreements, and minimal or absent consent by some of the states in which it is deployed. Political violence in some theaters still overwhelmingly targets civilian populations as well as peacekeepers under many of the classic tenets of irregular warfare, while political support for continued deployment is waning in many missions, and enhanced PoC mandates are not always fully implemented (Sherman 2011).

Taking a closer look, capability challenges that reflect the difficulties of an organization representing 192 member states exist in the complex and variable support provided by troop-contributing countries and police-contributing countries (TCCs/PCCs). Often with a clear dividing line between TCCs from the developing world and PCCs from the developed world, peacekeepers provided by member states often lack sufficient training or equipment. Lack of interoperability and standardized

doctrine present additional challenges. Member states often fail to fill the gaps in civilian and military requests by the UN for these missions. Additionally, UN peace operations' effectiveness can be decreased by command relationships, bureaucratic systems of accountability, limited capability of the UN's Department of Peacekeeping Operations (DPKO) as superior HQ, influence of interests by member states, difficult transfer of information within silo-like structures, and lack of coherent doctrine for fighting irregular war when necessary. Given the extraordinary growth in UN peacekeeping, and no reduction in need on the horizon, the ready stocks and funds to deploy missions have not been sufficiently adjusted. As is the case with NATO, member states have failed to provide the necessary additional capacity to reinforce missions during crises. Moreover, the UN still lacks sufficient capability to manage the massive peacekeeping tasks handed to it by the Security Council, with only 900 staff members in UNDPKO/DFS headquarters to manage this massive undertaking (Stodgers 2011). Other areas where progress is needed include the strengthening of linkages to peace building and mediation and improvement in the policy, financial, administrative, and logistics support required to successfully deploy the full range of international instruments addressing post conflict situations.

Overall, however, there is a trend for more robust and proactive responses, and the UN is engaged in devising specific training for peacekeepers on PoC and its implementation. In the past decade, beginning with the Brahimi report in 2000, the UN responded to its shortcomings with reform initiatives elicited by the UN Secretariat, the Security Council, and individual member states. These have included efforts to improve doctrine, planning, management, and oversight mechanisms for peacekeeping operations, as well as initiatives to expand the base of troops, police, and civilian peacekeepers and strengthen the capacity of those willing to contribute. (Sherman, 2011). Many of the recommendations have been implemented to various degrees. One notable example is the 2009 "A New Partnership Agenda: Charting a New Horizon for United Nations Peacekeeping." This document set forth a plan to address the complex and evolving nature of demands placed on UN peacekeeping and its diverse military, police, and other civilian elements. Key proposals outlined in the document focus on the enhancement of peacekeeping partnerships, helping to "build common ground among those who participate in peacekeeping operations: those who contribute to peacekeeping with personnel, equipment, and financial resources; those who plan, manage, and execute operations; and those who partner with UN peacekeeping operations to deliver on the ground." As one implementation example, since its publication, the DPKO has dramatically increased the number of consultative meetings with TCCs on the missions in which they are deployed.

One area that has taken on greater importance is the role of police engaged in policing missions in all their forms and capacities, which is crucial for stabilizing fragile and conflict-torn states. Of special note are the efforts to develop baseline capability standards for the policing functions and to build on recent successful innovative experience with the Formed Police Unit. A comprehensive police doctrine has been developed to help define the roles, responsibilities, and appropriate tasks—as well as expectations—of policing within a peacekeeping context. Discussions are underway on improving the current system for recruiting and deploying individual police for service in order to deliver high-quality personnel to missions quickly and efficiently (Durch, 2010).

Recently, a senior advisory group appointed by the UN wrote an important document to the General Assembly on enhancing the work of the Security Council and the peace operations it deploys. Recognizing the unique role of the UN in dealing with the aftermath of conflict and that situations change quickly as a community moves from war to peace, the advisory group called for a more flexible system that will also be more efficient. Leaders in the field, who are closest to needs,

must be able to draw on a menu of resources and capacities located within mission structures, the UN country team, and resources outside the UN in order to allocate resources based on comparative advantage. Whenever feasible, local capacities are recommended to be used. New ways of working include future missions that are leaner in terms of civilian staff and more flexible.

The Group uses a framework it calls “OPEN,” which refers to four key principles—ownership, partnership, expertise, and nimbleness. These principles are aligned with already existing efforts to enhance peacekeeping and peace-building capabilities stated in previous documents, and much of its thinking could be reflected in numerous US documents, such as the Department of State’s Quadrennial Diplomacy and Development Review (QDDR) and various counterinsurgency documents. For example, international assistance needs to be aligned with nationally identified needs and priorities, as well as identifying, protecting, nurturing, and supporting national capacities, core government functions, and national ownership. This includes ensuring a stronger role for women, whose active participation is essential for lasting peace. Specialist capacities outside the UN are crucial, and these niche skills can be found in UN Member States—in their governments, civil society, and private sectors.² There needs to be an easy process to access these capacities at short notice in response to demand. Additional recommendations include strengthening the quality and scope of training for senior leaders, as well as an adoption of a results-based performance audit culture that seeks to enable and improve implementation, rather than just punish administrative non-compliance.

In what ways can the US engage in more significant ways to allow the UN as well as regional organizations like the AU to stand up to challenges in the next 15 years in conflict areas around the world? All trends suggested above could be assisted by US capabilities. The US has been a prominent actor in facilitating peace agreements; Security Council resolutions; reform to create a culture of economy, ethics, and excellence; and “budget discipline, transparency, internal ethics rewarding talent, and retiring underperformers” (Rice, 2011). The Global Peace Operations Initiative (GPOI) program was initiated in 2004 and is funded through the Peacekeeping Operations (PKO) account, which is managed by the US Department of State’s Bureau of Political-Military Affairs in cooperation with the Department of Defense. Its aim is to address major gaps in international peace operations via “security assistance program[s] intended to enhance international capacity to effectively conduct United Nations and regional peace operations by building partner country capabilities to train and sustain peacekeeping proficiencies; increasing the number of capable military troops and formed police units (FPUs) available for deployment; and facilitating the preparation, logistical support, and deployment of military units and FPUs to Peace Support Operations (PSOs).” While the program’s first five years focused on significantly increasing the number of trained and equipped peacekeepers available for deployment, current program emphasis will shift to building sustainable, self-sufficient, local peace operation training capabilities in targeted partner countries, particularly via the establishment and strengthening of partner countries’ training infrastructures. Additional activities include enhancing the capacity of regional/sub-regional organizations and institutions to train for, plan, deploy, manage, sustain, and obtain and integrate lessons learned from

2 Capability gaps exist especially in the areas of: (a) basic safety and security: disarmament, demobilization and reintegration; police; and security sector reform and governance; (b) the area of justice: corrections; criminal justice; and judicial and legal reform; (c) inclusive political processes: political party development; and public information; (d) core government functionality: aid coordination; legislative branch; and public financial management; (e) economic revitalization: employment generation; natural resource management; and private sector development.

PSOs; and supporting the continuation and enhancement of multilateral approaches and partnerships to coordinate PSO capacity-building efforts.³

Yet more can be done to allow the peace operations to best address the conflicts they are embedded within. In a series of discussions between US and UN officials (Sodberg, 2011), participants pointed to areas in which the United States might be able to do more. These included providing support for intelligence, command and control, specific interoperability training, and regionally based centers of training; and better integrating the training of potential UN troop contributors into its own training efforts, perhaps through the combatant commands. Other recommendations included providing systems to better coordinate efforts by donors and strengthening an international peacekeeping coordination and support mechanism. Such a worldwide and systematic initiative could help the US identify countries with the capacity to be high-quality contributors.

Other important areas of influence are increasing the number of US experts in peacekeeping frameworks and enhancing partnerships with TCCs that have the potential to contribute more troops. To fill gaps in needed expertise, especially for overcoming political sensitivities, the US can organize a cadre of experts who can work outside the UN on short- or long-term contracts, have acquired expertise in conflict zones like Iraq and Afghanistan, and possess the senior leadership training that is highly prevalent in the US public and private sectors. Such a cadre should include a strong presence of professional women who can work specifically in roles empowering women in the host countries. With its performance-oriented culture and high-quality education and military training systems, the US contribution can be invaluable and is well aligned with America's currently high unemployment rates. With drawback from Afghanistan and Iraq, more officers can be deployed in key positions, such as logistics. Deployment of police is perhaps another crucial way to enhance the quality of peace operations. Seven US federal agencies collectively spend billions of dollars annually on training and equipping police in Afghanistan, Iraq, Pakistan, Mexico, Colombia, and elsewhere abroad in order to enable local police to better deal with terrorism, narcotics trafficking, and crime. This assistance could be extended directly to UN missions by actual deployment, either for the purpose of training or for actively engaging in policing activities with the local population.

To be able to target assistance more accurately, knowledge of trends of TCC deployment needs to be mapped accurately. In a recent study, global capacity has been compartmentalized into two groups—the UN and CWA clusters—that accounted for 85 to 90 percent of all contributions from 2001-08 (Daniels, 2011). There is little overlap between them, with the CWA mostly including troops from the US and Europe, one consequence being that the UN group does not have many contributors with highly resourced forces, while the CWAC group that could provide those forces is so strained quantitatively that it must make major trans-regional shifts to meet its needs beneath a ceiling of about 75,000. The study's finding support the initial statement of this paper—that two parallel worlds exist, and that they complement each other in tasks—yet have the capacity to cooperate in a number of ways, on the ground and beyond.

With the withdrawal of US troops there could be a change in the strict boundaries between the two groups, and while the US has been reluctant to serve under UN command, the recent flexibility of

³ The support provided by GPOI by the end of 2010 was active in 58 selected countries around the world, especially in Africa and South America. Over 120,500 peacekeeper trainees and peacekeeper trainers have been trained, and GPOI has facilitated the deployment of over 110,500 personnel from 29 countries to 19 operations around the world. In addition, GPOI has directly or indirectly supported the training of over 3,500 police trainers from 49 countries at the Italian-run Center of Excellence for Stability Police Units in Vicenza, Italy.

command and control (the re-integration of European into UNIFIL is one example) can perhaps allow a partial reintegration into peacekeeping. With worldwide changes in militaries, an added advantage for the US is finding new partners with whom to operate in its own missions, those done in the NATO framework, or help the UN recruit more troops. Daniels (2011) suggests several indicators to look for and discusses the proposal that the US lead and set up an effort to link states together to fill a critical capability gap: the formation of quickly deployable, mission-planning and headquarters battalions, ideally at least two Standing High Readiness Battalions (SHIRBATs) that would be the lead central organizational elements of UN missions involving several thousand people.

Conclusion

The international community's response to armed conflict may be more promising than is generally believed. The global system is increasingly policed by its multilateral institutions—indeed one of the principal ideas behind the founding of the UN. The US may be forced into this position by its own strategic, budgetary, and political circumstance as well as the changing circumstances of the global order and strength of other states. There is evidence to suggest that the UN may be slowly but surely filling the vacuum left by the US, as it has been doing for years, perhaps presenting a promise that the global system will not break down after all. Moreover, the UN's multiple capabilities—from a global and sound health organization, refugee sheltering capabilities, humanitarian assistance, and development agencies, and expertise in transitioning countries to democratic governance—afford leverage and legitimacy that go beyond what the US alone can offer.

For shorter-term action with long-term effects, as well as from a legitimacy point of view, the UN is the global responder of choice. From an effectiveness perspective, its strength lies in responding to the immediate aftermath of conflict rather than being an actor in the conflict, preventing a recurrence of the devastation, and helping civilians get their lives back into new order with the aid of multidimensional peacekeeping. The other part—effectively enforcing a stop to the devastation in the first place—is almost exclusively reserved for non-UN operations that, more often than not, are the province of a cluster of states and of one idiosyncratic actor, e.g., as in Afghanistan and Timor-Leste.

The two parts constitute a whole when the UN and non-UN operations occur in sequence or in parallel, the result being a division of labor that, at the end of the day, is a net plus for civilian protection (Daniels, 2011). Despite European military decline, NATO is still the only organization that can currently take on the peace enforcement portion.⁴ The US needs to watch closely Asian alliances as potential regional contributors to peacekeeping, keeping note that Asia, “with its dynamism and power struggles, in some ways resembles the Europe of 100 years ago” (Haas, 2011). In African conflicts, the AU is getting more prominent in its involvement in peace operations. Here, enhanced training and equipment assistance from the US as well as NATO will continue to be needed.

4 As a warning note however, the Defense Secretary indicated he is “worried openly about NATO turning into a two-tiered alliance: Between members who specialize in “soft” humanitarian, development, peacekeeping, and talking tasks, and those conducting the “hard” combat missions. Between those willing and able to pay the price and bear the burdens of alliance commitments, and those who enjoy the benefits of NATO membership – be they security guarantees or headquarters billets – but don’t want to share the risks and the costs. This is no longer a hypothetical worry. We are there today. And it is unacceptable.” With the UN, currently there are no participants with a taste for the hard combat missions.

For the US, this means, in the words of its ambassador to the UN, that “We are far better off working to strengthen the UN than trying to starve it—and then having to choose between filling the void ourselves or leaving real threats untended... yet we need to continue to lead the charge for serious and comprehensive reform.” No less important is that the US needs to venture beyond its educating and training role, and be able to learn best practices from its partners around the world in how to conduct multidimensional operations in post-conflict areas. The UN and its TCCs have gathered invaluable experience throughout the last decade that too often sits below the radar for deployed US units and personnel as well as policymakers. With so many uncertainties around future warfare and responses to it, multilateral cooperation, capabilities, and reforms in the world of peacekeeping and international security will unfold in ways that will profoundly affect the world’s ability to address organized violence in inter and intra-state disputes.

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13. Israel's Future Wars: Universal Lessons of a Peculiar Case¹

Eitan Shamir

Introduction

The following paper examines Israel's views toward future armed conflicts. It discusses four main themes: Israel's traditional security doctrine since the days of its establishment; the emergence of new threats over the last decade and their future significance; Israel's evolving response; and the question of what, if any, relevance this has for the United States. The main argument of this paper is that, while one could conceive Israel's situation as a window to the future and benefit from studying various aspects of its force structure and employment, one should also be very cautious in making comparisons to Israel's unique situation and responses.

Israel's traditional security doctrine

Israel's original security doctrine was shaped by its geostrategic position and a host of constraining factors, such as demographics. David Ben Gurion, the architect of Israel's security doctrine was mindful of the need to tailor a “unique response to a unique situation.” Ben Gurion's analysis led him to form the following basic assumptions:

- Arab hostility toward the State of Israel will likely continue for decades
- Israel suffers from chronic inferiority in both territory and demographics

This basic asymmetry in resources, combined with Arab hostility, led him to conclude both that Israel cannot afford to maintain a huge army and that only a series of decisive defeats on the battlefield might convince Arab regimes to accommodate the notion of Israel's permanence.

The major threat during Ben Gurion's years as prime minister (1955-63) was a potential invasion of Israel by strong conventional forces of one or more Arab armies effectively occupying and cutting off major centers and, thus, ending the life of the young Jewish state. In addition, these early years of the state of Israel saw the rise of terror attacks against settlements along Israel's borders disrupting normal life.

Under Ben Gurion's leadership, Israel's security tenets were shaped by the following principles:

- Exhibiting conventional superiority and self-reliance on the battlefield in order to achieve a quick decision by quickly transferring the war into enemy territory, annihilating its main forces, and threatening its capital. In the absence of a big standing army, most units would be comprised of reservists.
- Develop and maintain a special relationship with a superpower (initially France, later the United States) for the sake of diplomatic and material support.
- Obtain technological superiority grounded in top-flight academic and research institutions in order to nurture a thriving industry. The concept of nuclear ambiguity appeared later.

- Possess moral and ideological certainty that Israel's struggle is inherently just, which is critical for mobilizing society to endure a long struggle.

Ben Gurion believed that sustaining the above qualities would generate superior battlefield performance and secure Israel's existence.

These security tenets were then translated into three organizing operational concepts: *deterrence*, *early warning*, and *decision*. Deterrence was not understood as absolute deterrence, but rather as *accumulative deterrence*. It is different from the concept employed by the two superpowers during the Cold War. Israeli deterrence meant postponing each round of violent conflict as much as possible, but realizing that, since conflict is unavoidable, deterrence is inherently destined to fail at one point or another. When this happens, *early warning* capabilities will enable a quick mobilization of Israel's reserve units, which comprise the bulk of its ground forces. This process operates with minimal interference due to the Israel Air Force' air superiority. Reserve forces that have been quickly assembled into brigades and divisions will then reinforce standing army units that have been both blocking an enemy advance on the border and maneuvering inside enemy territory for the sake of neutralizing its main forces. Operationally, this is achieved by employing a classic maneuver that aims to envelope or encircle the primary forces of the enemy. A quick and *decisive* outcome is critical also due to the deployment of reserves that are needed desperately to perform their regular civil functions.

This approach was also characterized in US Army doctrine as a “maneuver approach,” one that seeks to neutralize or strike critical enemy targets and thus paralyze an opponent's entire system. It emphasizes speed and the independence of commanders who are able to exploit fleeting opportunities on the battlefield, virtues, which the Israel Defense Force (IDF) perceives that it possesses as an advantage over its adversaries.²

According to this doctrine, the outcome of every round of violence should leave no room for interpretation. The victorious should be undisputed and the price paid by the vanquished in prestige and material should be sufficiently heavy that they lose their appetite for another round in the foreseeable future. Ben Gurion hoped that, after a few rounds with exclusively negative outcomes for Israel's adversaries, the Arabs would understand that they had reached a strategic impasse and thus desist. This is the thought that underlies *accumulative deterrence*—gathering more deterrence with each additional round of fighting.

Israel's security doctrine served the country well during the first four decades of its existence. However, there were also some interesting deviations. For example, in both 1956 and 1967, Israel initiated preemptive strikes when it felt threatened, demonstrating that the interpretation of *early warning* in its doctrine was an elaborate one. In 1956, Israel went to war only after it secured the direct military cooperation of two European powers, Great Britain and France. In 1960, its early warning system failed when the Egyptian army was deployed in the Sinai during what is known as the Rotem Affair. Later, in 1973, the early warning system failed again, this time when enemy intentions were misinterpreted. Although enemy troop mobilization offered a clear signal, the Israeli government refused to order a preemptive strike out of fear for the political consequences and Israel came under a surprise attack. But, other components of its security doctrine worked magnificently well and enabled Israel to turn the tables in this conflict. These included American political assistance and shipments of military hardware, quick mobilization of reserve units, and the ability of IDF commanders to seize the initiative after the initial surprise and transfer the battle to enemy territory.

Paradoxically, Israel's early warning failed after territorial expansion, which followed the Six Day War in 1967. On the eve of the 1973 Yom Kippur War, the option of a preemptive strike was considered by the government, but rejected by then-Defense Minister Moshe Dayan due to the heavy diplomatic costs involved. The enhanced territorial buffer gave Israel a sense of security and allowed risk-taking that it otherwise would have avoided prior to the Six Day War.

It can be argued that Israel's security doctrine, including the idea of accumulative deterrence, has been successful. Egypt, Israel's main and most dangerous rival, signed a peace treaty with Israel in 1979, followed by Jordan in 1994. Syria has upheld the 1974 ceasefire agreements on Golan Heights in spite of serious tests, such as the 1982 and 2006 Lebanon Wars and other more recent operations reported in the media. However, the transformation of the strategic landscape during the 1990s and 2000s has witnessed the rise of new types of adversaries, posing various new and additional threats.

Israel's evolving threats

In the past, primary threats to Israel's security would be divided into two main groups: threats posed by conventional militaries from bordering states to Israel's territorial integrity and threats posed by non-state terrorist organizations, chiefly involving disruption of daily life. However, since the 1990s, Israel has seen the emergence of new types of threats, which have taken a more dominant role. That said, Israel cannot completely exclude the risk of traditional threats—witness recent events in the Arab world, such as the so-called Arab Spring, particularly in Egypt. The landscape requires the incorporation of new threats into Israel's pre-existing security doctrine in such a way as to provide a response to both old and new types of threats.

What are these new types of threats? One categorization compartmentalizes them according to geography: Israel and the Palestinian territories under its control, Israel's immediate neighbors, and its outer circle.

Israel and the Territories

Should the Israeli-Palestinian negotiations fail or continue to languish, a disappointed Palestinian population could mount a popular uprising similar to the 'slingshot and stone' intifada of 1989-93. This scenario was already much discussed before the September 11, 2001, terrorist attacks in the United States and the unilateral Palestinian drive toward statehood at the UN. Palestinian terrorist organizations might also emerge and launch a suicide bombing campaign similar to the one of the 2001-03 second intifada.

Israel's immediate neighbors

As mentioned above, the probability of a conventional attack by an immediate neighbor has been reduced dramatically during the last two decades, but should not be excluded completely. This assessment could change once the dust finally settles on the Arab-Spring movement that has engulfed Arab states, such as Syria and Egypt, and will determine the fate of these countries.

An additional evolving threat that Israel has experienced is the rise of strong non-state actors, such as Hezbollah and Hamas. As masters of a territory and population, these actors combine religious

ideology, a political agenda, and armed struggle. They rely on the support of both local populations and foreign powers, such as Iran and Syria, existing almost as states within states, thus enjoying the advantages of statehood while not being held accountable for their actions as states are.

Hezbollah has evolved as a prototypical champion of what some characterize as “hybrid warfare,” incorporating a mixture of tactics seen in guerrilla warfare, urban terror, and conventional combat with the objective of neutralizing Israel's operational and technological advantage. This construct has been described in a study published by the IDF's Dado Center as the “Other RMA” (Revolution in Military Affairs).³ Conceptually, it encompasses three main principles—*deterrence*, *survivability*, and *attrition*—with large quantities of cheap and easy-to-maintain concealed projectiles poised against Israeli population centers. These projectiles are camouflaged and defended from an Israeli ground incursion in tough-to-maneuver terrain and protected against Israel's sophisticated defense systems that include well-trained light infantry equipped with mortars, anti-tank guided missiles (ATGMs), and advanced Command and Control (C2) systems.

This hybrid-warfare system with its offensive and defensive capabilities achieves *deterrence* by holding Israeli civilians hostage and raising the cost of mounting an operation within the enemy territory. *Survivability* is achieved through redundancy, concealment, and invisibility as IDF forces incur casualties while attempting to crack the defenses safeguarding the rockets that fire on Israel's population. In this manner, *attrition* is then achieved and the terrorist groups can proclaim a ceasefire as having resisted surrender, unlike the large Arab armies in the past. In such as conflict, the terrorists survive and keep firing their missiles until the end, inflicting terror and casualties on Israel.

The conflicts in Lebanon (2006) and Gaza (2008) exposed some of the strengths and weaknesses inherent to this condition. Both Hezbollah and Hamas were able to fire rockets into Israel until the last day of hostilities. Both suffered enormously, but survived.⁴ Both succeeded in manipulating the narrative of the conflict—in the media and public eye—to their own benefit. The lesson they learned seems clear: keep it up in both quantity and quality. Their goal is now to increase missile payloads and accuracy to the point where they cannot only terrorize Israeli civilian centers, but also hit strategic civilian infrastructures and military installations, thereby disrupting the IDF as it mobilizes its reserves and tries to function effectively.

An interesting phenomenon of recent years has been the doctrinal convergence between organizations such as Hezbollah and states like Syria. Impressed by the success of the Hezbollah model and aware of its own limitations, the Syrian armed forces have increasingly adopted the Hezbollah model. The Syrian state, however, possesses a much larger and much more accurate missile arsenal capable of accurately striking on critical assets in Israel. At the same time, Syria *is* also a state and thus does not enjoy the same immunity as Hezbollah.

Israel's Outer Circle

During the 1991 Gulf War, Iraq fired 39 Scud missiles at Israel, marking a new era in Israel security. Previously Iraq and other countries lacking a mutual border with Israel had dispatched ground forces as reinforcements to help their Arab neighbors fight Israel. Such was the case in both 1948 and 1973. The introduction of ballistic missiles later provided the means to hit Israel from afar. Since the 2003 invasion of Iraq and the neutralization of its strategic capabilities, Iran has taken the lead in developing long-range ballistic missile capabilities. Syria also possesses a large arsenal of these

missiles. It would take 60 seconds for a Syrian Scud and 10 minutes for the same missile launched from Iran to strike Tel Aviv.

New missile capabilities by those in Israel's Outer Circle are now being coupled with an increased WMD potential and enhanced nuclear program. Saddam Hussein's Iraq was suspected of pursuing this course and thus was invaded by a US-led coalition. At present Iran remains undeterred, continuing its own nuclear program.

The Rival System: Creating synergy

Another way to view these emerging threats is to conceptualize the various hostile entities as one system with different components that reinforce each other and create a *synergetic* effect. Hezbollah and Hamas are proxies of Iran and Syria; all these actors are dependent on each other, playing different roles and utilizing their relative advantage. Hezbollah and Hamas are well trained and benefit from access to state-of-the-art weapons, deep bunkers, ATGMs, and C2 systems precisely because they are supported, equipped, and trained by states. Without state support, these organizations would not pose the same threat level to Israel. It is the merger between states and non-state organizations that generates such a wide spectrum of threats: WMD, standoff fire, suicide bombings, international terror, guerilla insurgencies, and conventional warfare.

Israel's doctrinal response

Israeli defense planners have taken note of this changing landscape and have been working to update Israel's defense thinking over the past decade. Some of Israel's defense tenets will remain the same, others will be reinforced, and others are destined for change.

In Israel, unlike in Europe or even the US, the defense budget is likely to grow over the next few years. Fortunately, the Israeli economy has remained robust and has experienced steady growth, despite the current global economic turmoil that began in 2008, thus allowing a budget increase without applying unbearable strain to the economy.

Israel will continue to rely on the US as its major ally, with increase dependence on collaboration in the field of military technology (e.g., future JSF F-35 procurements) and the need for critical US support in the international arena. Moreover, in contending with an adversary as large and distant as Iran, Israel continues to invest in long-range capabilities, such as submarines, space technologies, the Joint Strike Fighter, and enhanced Special Forces capabilities. Despite these enhanced capabilities, Israel understands it still requires the assistance of a super power in some areas. For example, US radar systems deployed in Israel are designed to detect incoming ballistic missiles from a distance of 2,000 km and allow Israel's missile defense systems additional critical response time.

Israel will continue to depend upon its *technological edge* to develop new technological solutions for at least some of its main security challenges. This was demonstrated after the 2006 war, when Israel built both the Trophy system to counter ATGMs and Iron Dome to intercept short-range rockets. Both systems have already proven themselves operationally.

In terms of force, design *versatility* is key. Facing a large spectrum of threats, Israeli force planners prefer those means which can operate in numerous different scenarios and be optimized, even if not ideally, in both counterterrorism and conventional battlefield situations. For example, the IDF only

employs main battle tanks (MBT) that are most suited to conventional engagements, but also employs these tanks in counterterrorism and guerrilla warfare scenarios.

Changes and modifications have been made in the *deterrence–early warning–decision* concept. *Deterrence* has become a key tenet. In some scenarios, it is unclear whether a decisive victory can be achieved; when fighting against hybrid organizations, the goal is to hit them hard and as quickly as possible. At the same time, the Israeli home front will be exposed to a barrage of missiles and rockets, giving rise to another key concept: *defense*.

The doctrine speaks of two types of defense: active and passive. Active defense includes multiple layers of anti-missile defense systems, like the Arrow (against long-range missiles), David's Sling (mid-range), and Iron Dome (short-range rockets and missiles). However, these are expensive and can provide protection to only critical installations, ensuring that the state and the military can continue functioning. In parallel, the doctrine calls for investments in passive defense, building installations to protect the population but also educating them how to behave in such scenarios. This requires enhanced cooperation between Israel's various organizations and agencies, including local municipalities, police, and ministries responsible for and during crisis situations.

Israel also invests heavily in its conventional forces. The Merkava 4 and the Namer, a heavily protected armored personnel carrier based on the Merkava chassis, are both equipped with the Trophy system and are designed to enable the IDF to conduct combined arms operations—fire and maneuver—in order to penetrate even the most fortified lines as on the Syrian front. No less important, the IDF is conducting additional training and maintaining high force readiness. The IDF is still comprised of conscripts and reserves with a professional officer corps, but, due to growing technological and professional requirements, an increased number of positions are filled by career soldiers.

What are the relevant take-aways?

Of the four scenarios presented in the workshop materials, the only one capable of genuinely enhancing Israel's security by reducing the spectrum of threats is the *concert of powers*. The major source of instability in the region is Iran. If the leading world power were to contain the Iranian regime through effective sanctions and a credible military threat, the current radical regime could collapse, possibly destabilizing all radical elements in the region. This, in turn, might facilitate the resumption of Israeli-Palestinian negotiations and pave the way for a possible Israeli-Palestinian agreement. The other three scenarios offer no real potential for increased pressure on the Iranian regime. As such, one can surmise that the security trends described above are likely to continue.

Strategically, Israel's prevailing security doctrine is designed for deterrence. Israel may be the only country in the world, with the possible exception of South Korea, facing an imminent threat on its borders from strong militaries and a parallel missile threat to its main population centers. In contrast, at least for now, the US is focused on nation-building abroad and, thus, mobilizing forces and engaging in activities that are mostly counterinsurgency and population-centric in nature. For the IDF, civilians in battlefield areas are essentially a "nuisance," interfering with pursuit of the enemy. In contrast, for US forces, winning the hearts and minds of the people is the current mission. These conflicting goals engender a host of other differences in force composition, tactics, and operations.

Yet, there are a number of similarities as well. Both militaries fight regularly in urban areas where the enemy hides among the civilian population. Both lock horns with various radical Islamist groups that advocate deep hatred for the West and its belief system. Some tactical challenges are common to Israel and the US as well, including threats posed by improvised explosive devices, rocket-propelled grenades, mortars, other small arms, and suicide bombers.

Notwithstanding, in 2006, and to a lesser degree in 2008, the IDF confronted a much more sophisticated opponent than that which the US has faced in both Afghanistan and Iraq.⁵ Given this state of affairs the IDF resolved to restore and improve its conventional combined arms fighting abilities, having concluded that its infantry and armored units require greater firepower and protection for the task of maintaining mobility on the battlefield. If Iran now equips US adversaries with some of the same capabilities as Hezbollah, or if in the near future the US military is tasked to conduct deterrent/punitive expeditions that involve ground forces rather than the current focus on counterinsurgency and nation-building, it is advisable to carefully study the lessons learned by Israel in 2006 and 2008 and adjust accordingly.

1 I wish to thank Shalom Lipner for his comments on earlier versions of this paper.

2 See the chapter on the IDF tradition of command in Eitan Shamir, "Transforming Command: The Pursuit of Mission Command in the US, UK and Israeli Armies," (Stanford: Stanford UP, 2011).

3 The Study can be found in: BG Itai Brun, "While You Were Busy Making Other Plans: "The Other RMA," *Journal of Strategic Studies*, 33:4, 2010, 535-565.

4 See: Martin van Creveld, "The Second Lebanon War: A Re-assessment," *Infinity Journal* 3 (Summer 2011), 4-7.

5 See the paper by David Johnson (RAND) on Israel's war against Hezbollah and Hamas.

14. Minding the Middle: Insights from Hezbollah and Hamas for Future Warfare

David E. Johnson

Introduction

This paper examines the relevance of Hezbollah and Hamas to current and future forms of warfare. A brief review of the literature, however, makes it clear that Hezbollah, particularly during its 2006 war with Israel, has already had a significant impact on US military thinking.

In the aftermath of the 2006 Second Lebanon War, considerable attention was paid to the implications of that conflict for the future of warfare. Frank Hoffman and others started a discussion in 2007 that, in the beginning, was quite useful in examining what many began hailing as a new form of warfare: so-called “hybrid war.” Hoffman’s initial definition framed hybrid war, based on the Hezbollah example, as a “blend of the lethality of state conflict with the fanatical and protracted fervor of irregular war.”¹ Others argued that it was nothing new, citing the Vietnam War and other precedents.

Over the next few years writing on hybrid warfare became somewhat of a cottage industry, with each successive article—trying to appear ever more insightful—perhaps generating more heat than light. By late 2009, Hoffman had expanded his definition of a hybrid adversary to “any adversary that simultaneously and adaptively employs a fused mix of conventional weapons, irregular tactics, terrorism and criminal behavior in the battle space to obtain their political objectives.”² He also added the category of “compound wars” to explain the 2008 Georgia War, defining them as “conflicts with regular and irregular components fighting simultaneously under unified direction.” In his view, while the Russian Federation used armored formations and bombers, it also relied on cyber attacks and “irregular Chechen units, including the notorious Vostock Battalion” to defeat the Georgians.³ Hoffman’s description, while interesting, tended to ignore the principal determinant of Russian victory: what crushed the Georgian military was overwhelming Russian force, which included Russian air, naval, ground, and special forces units.⁴ In many ways the debate about future warfare became similar to one often attributed to academics: It works fine in practice, but what about the theory?

One final point that is important to mention about the 2006 Second Lebanon War before moving on. The “lessons learned” from the conflict became central to the debates about future US military capabilities during the Quadrennial Defense Review and about operational doctrine at the US Joint Forces Command (USJFCOM). In short, the Second Lebanon War was used by some to challenge the views since the Kosovo War of the ascendance of America’s air and network-centric, high-tech notions of warfare—which were already under assault after three years of tough, post-Operation Iraqi Freedom operations. Indeed, the Second Lebanon War became the basis for General James Mattis, USJFCOM Commander, to mandate “*Effective immediately, USJFCOM will no longer use, sponsor, or export the terms and concepts related to EBO [effects-based operations], ONA [operational net assessment], and SoSA [system of systems analysis] in our training, doctrine development, and support of JPME.*”⁵

Thus, one could argue that Hezbollah and the 2006 Second Lebanon War have already had a significant impact on current and future US military thinking, doctrine, and capabilities. This essay

will argue that the practice is perhaps more nuanced than the accepted theory, that it does matter, and that Hezbollah and Hamas provide insights into the challenges in future warfare that the United States could face in the next 20 years.

Hezbollah

Hezbollah is a Shi'a Islamist political and paramilitary organization that rose to prominence largely in response to Israel's occupation of southern Lebanon from 1982 to 2000. It is classified as a terrorist organization by the United States and others.⁶ Perhaps its most memorable act of terror was the 1983 suicide bombing of the Marine barracks that killed 299 American and French servicemen.⁷

Hezbollah seeks to eliminate "the influence of any imperialist power" in Lebanon, desires Israel's "obliteration from existence and the liberation of venerable Jerusalem," and wants to establish an Islamic regime in Lebanon.⁸ Hezbollah was inspired by Iran's leader of the 1979 Iranian Revolution, the Ayatollah Khomeini, and receives training and weapons from the Iranian Republican Guard and Syria.⁹

Hezbollah advocates and practices military *jihad*. *Jihad*, in the words of Sheik Naim Qassem, one of Hezbollah's founders and its Deputy Secretary General "is thus another form of appraising life: death with surrender and shame versus a life of jihad ending with martyrdom for the sake of virtue's victory and national pride. In this context, Commander of the Faithful Imam Ali . . . said 'Death shall defeat you in life, and you shall defeat life through death.'"¹⁰

Martyrdom was also viewed since the inception of the organization as a means to confront the Israel Defense Forces (IDF) with an asymmetric challenge by providing "compensation for military imbalance and infliction of painful losses on enemy ranks. . . . This was realized through simple and humble technologies that, on the one hand, shook the Israeli army's ability of defend itself and on the other unsettled its ability to retaliate."¹¹ In the furtherance of its strategy, Hezbollah conducted raids and suicide attacks against IDF troops and other targets in Lebanon.

By 2006, Hezbollah was the dominant power in Southern Lebanon, providing education, health care, and other social services. Over time, Hezbollah, currently led by Secretary General Hassan Nasrallah, developed into a political organization, holding seats in the country's parliament and wielding considerable power in Lebanon's fractured political landscape.¹² Indeed, as a key member of the "March 8 Alliance," a coalition of political parties formed in 2005 and currently the ruling coalition in Lebanon, Hezbollah enabled the nomination of Najib Mikati as the Lebanese Prime Minister.

Hezbollah also has significant military capabilities. In 2006, the Israelis estimated Hezbollah had 10,000 fighters. Although active throughout Lebanon, Hezbollah was concentrated in South Lebanon, Beirut, and Baalbek. The headquarters and Nasrallah's offices were located in the Dahiye neighborhood in the Shiite section of Beirut. The majority of Hezbollah's fighters were located in the Nabatieh region and south of the Litani River. Although exact numbers are difficult to ascertain, published sources state that Hezbollah relied almost exclusively on the 3,000 fighters in the Nasr Brigade in Southern Lebanon during the 2006 war.¹³

Hezbollah's military wing is hierarchically organized, but operates in a cellular manner with good operational and communications security to avoid detection from Israeli sensors and aerial attack. Additionally, Hezbollah established bunkers and fighting positions in Southern Lebanon, taking

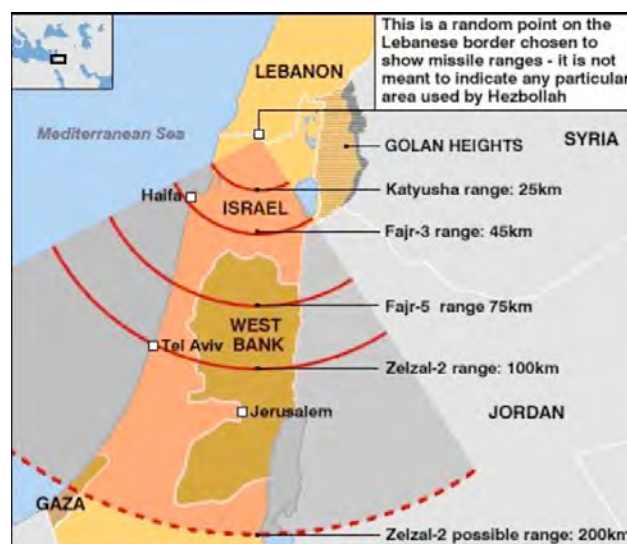
advantage of the complex terrain and villages in the area, before the 2006 war. They also integrated effective standoff weapons, such as antitank guided missiles (ATGMs), mortars, and short-range rockets, with mines and improvised explosive devices (IEDs) and competent fighters to stymie IDF advances into Lebanon in 2006. Finally, Hezbollah relied on cached materiel to avoid exposing its resupply efforts to Israel Air Force (IAF) interdiction.

Within and behind its ground defenses, Hezbollah deployed the rockets shown in Table 1, which ranged into Israel, as shown in Figure 1. This enabled Hezbollah to conduct a tactical defense—essentially an “anti-access” approach—to support a strategic rocket-based offensive.

Table 1: Hezbollah-deployed Rockets (2006)

Type	Range (km)	Payload (kg)	Quantity
<i>Short-Range:</i> 107-mm Katyusha 122-mm Katyusha 122-mm Extended Range Katyusha 240-mm Katyusha	7–40	7	13,000
<i>Mid-Range:</i> 240-mm Fajr-3 330-mm Fajr-5 220-mm Urgan 302-mm Khaibar-1	45–70	50–175	~1,000
<i>Long-Range:</i> 610-mm Zelzal 2	200	400–600	Dozens

Figure 1: Range of Hezbollah Rockets (2006)



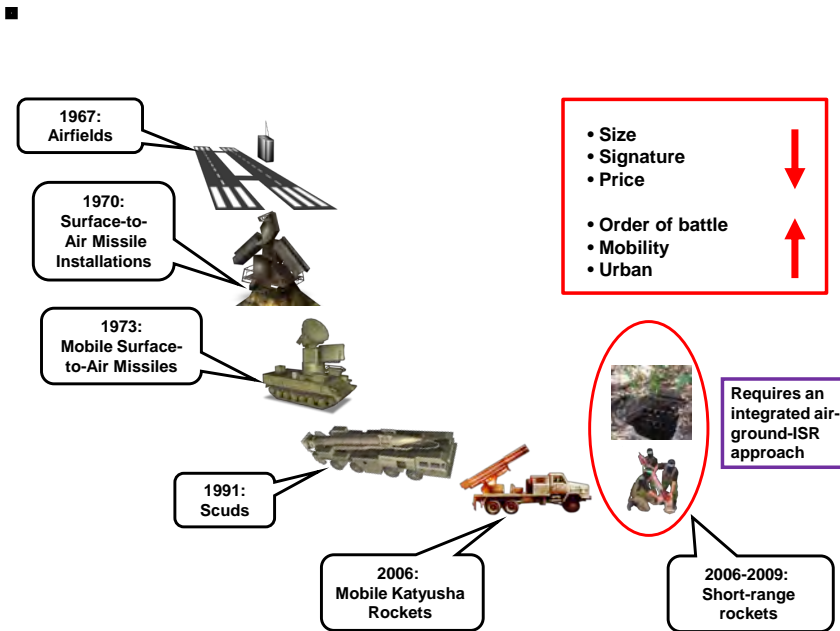
Source for Table 1 and Figure 1: “Hezbollah’s Rocket Force,” BBC News, July 18, 2006, at http://news.bbc.co.uk/2/hi/middle_east/5187974.stm, accessed May 15, 2010.

The 2006 Second Lebanon War

The 2006 Second Lebanon War began when Hezbollah abducted two Israeli soldiers in July 2006, an act that was preceded by at least four other attempts to capture IDF personnel.¹⁴ Initially, the IDF tried to decide the issue with standoff air and artillery attacks, but this did not stop the rocket attacks on Israel, nor result in the return of the soldiers whose capture had precipitated the war. Israel largely stumbled into ground operations in Lebanon, where it had no desire to renew a long-term presence having removed its ground forces from there in 2000.

Although the IDF was successful in finding and attacking medium- and long-range rockets that had hit major population areas like Haifa—largely because of their size and need to be in relatively open areas to fire—targeting and attacking short-range rockets proved an elusive proposition from the air. The evolving nature of targets the IDF has faced and solved over the years, shown in Figure 2, is the challenge to high-tech, standoff warfare posed by concealable rockets and adaptive adversaries.

Figure 2: Adversary Adaptation to High Technology Warfare



Source: IAF Doctrine Branch.

Throughout the war, short-range rockets rained down on Israel. Eventually, Israeli ground forces entered Lebanon to deal with the short-range rocket threat and confronted serious difficulties. One of the key deficiencies was that the Israeli Army, highly conditioned by its low-intensity combat (LIC) experience during the first and second *intifadas*, was initially confounded by an enemy that presented a stand-off fire challenge with its mortars, ATGMs and man-portable air defense systems (MANPADS), which required joint combined arms fire and maneuver and a combat mindset different from that used to address Palestinian terrorists, even though Hezbollah did not present large formations. The central issue was one of closing with the enemy. The irregular Palestinian forces were generally engaged immediately in close combat at ranges of 500 meters or less. Standoff

weapons gave Hezbollah the capability to engage with mortars and ATGMs at extended ranges (as much as five km with AT-14 Kornet-E ATGMs). For the IDF to have been successful, it would have had to use combined arms fires to suppress Hezbollah stand-off weapons to enable IDF infantry to maneuver to close combat ranges. One IDF Israeli observer noted that: “Prior to the war most of the regular forces were engaged in combating Palestinian terror. When they were transferred to Lebanon, they were unfit to conduct combined forces battles.”¹⁵

The IDF ground force performance in Lebanon was poor, and most units did not achieve their objectives by the end of the war. This created a significant issue for Israel: For the first time the IDF did not seem invincible, raising concerns domestically about deterrence. Finally, by staying in the fight until the ceasefire, Hezbollah was able to say it had won by not losing. The Second Lebanon War was a wake-up call for the Israelis.

In the aftermath of the Second Lebanon War, the IDF went “back to basics.” Training on high-intensity, combined arms combat was markedly increased, as were procedures to integrate air and ground forces. Additionally, the IDF procured more Merkava IV tanks, began producing an armored personnel carrier based on the Merkava chassis (Namer), and started fielding active protection systems for its armored vehicles to mitigate the rocket propelled grenade (RPG) and ATGM threats. Israel also accelerated the development and fielding of its missile defense programs.¹⁶

Hamas

Hamas¹⁷ is a Sunni Palestinian militant organization that was formed in 1987 at the beginning of the first *intifada* (uprising). Hamas has become a key player in Middle Eastern politics. Hamas is an offshoot of the Egyptian Muslim Brotherhood that “combines Palestinian nationalism with Islamic fundamentalism. Its founding charter commits the group to the destruction of Israel, the replacement of the PA [Palestinian Authority] with an Islamist state on the West Bank and Gaza, and to raising ‘the banner of Allah over every inch of Palestine.’”¹⁸ Article 8 of the Hamas Charter is “The Motto of the Islamic Resistance Movement:”

God is its goal;

The messenger is its Leader.

The Quran is its Constitution.

Jihad is its methodology, and

Death for the sake of God is its most coveted desire.¹⁹

Hamas’ founder and leader, Sheikh Ahmad Yassin, was killed by an Israeli missile in March 2004. Ismail Haniyeh, the Gaza government’s prime minister, is the organization’s senior figure in Gaza; Khaled Meshaal, Hamas’ leader, lives in Damascus, Syria.²⁰

Hamas broke from the nonviolent activism of the Muslim Brotherhood in 1988 when it committed itself to the objective of driving Israeli forces from the occupied territories and placing itself at the forefront of Palestinian resistance to the Israeli occupation. Hamas’s tactics include suicide bombing and rocket attacks against civilians. Its founding charter calls for the destruction of Israel and for the

establishment of an Islamic state on all of historic Palestine, including Israel. The United States, European Union, and Israel have all designated Hamas as a terrorist organization.²¹

In January 2006, Hamas defeated Fatah, the party of the Palestinian Liberation Organization (PLO) president, Mahmoud Abbas, in parliamentary elections. In the summer of 2007, tensions between Hamas and Fatah erupted and “Hamas routed Fatah supporters, killing many and sending others fleeing to the West Bank. The result was a de facto geographic division of Palestinian-held territory, with Hamas holding sway in Gaza and Fatah maintaining the internationally recognized Palestinian Authority government in the West Bank town of Ramallah.”²²

The relationship between Hamas and Fatah appears to be changing. On April 27, 2011, Fatah and Hamas announced their reconciliation and prospects of forming a temporary unity government. This situation is alarming to Israel, as seen in the comments on the deal by Israeli Prime Minister Benjamin Netanyahu: “The Palestinian Authority must choose either peace with Israel or peace with Hamas. There is no possibility for peace with both.”²³

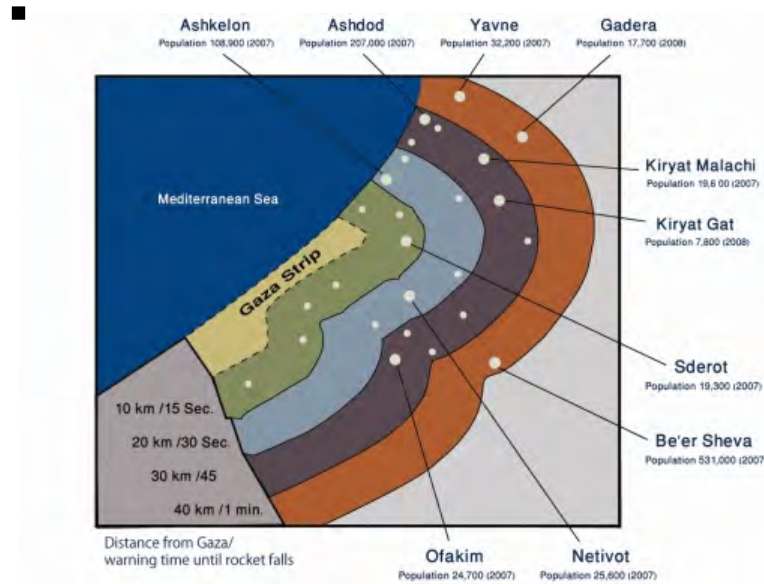
Since its inception, Hamas divided its activities into three main spheres of operation: (1) a political section, involved in Palestinian politics; (2) a social section, providing basic social services to its constituencies such as hospitals, schools, and religious institutions (modeled on the Muslim Brotherhood and the Lebanese Hezbollah); and (3) a militant section, represented by its paramilitary wing, the Izzedine al-Qassam Brigades, which engages in acts of terror against Israelis and also participates in conflict against other Palestinian factions.²⁴

The Izzedine al-Qassam Brigades is the main militant-terrorist organization in the Gaza strip. It is organized into several semi-military echelons, including brigades, battalions, companies, platoons, and teams, with more than 10,000 operatives.²⁵ These reinforce the regular hard core of several hundred skilled fighters, supplemented by others.²⁶ The force is organized into four regional sectors: Northern sector (one brigade), Gaza City sector (two brigades), Central sector (one brigade), and Southern sector (two brigades).²⁷ Hamas’s skilled fighters, numbering several hundred, are mainly trained in Lebanon by Hezbollah, Iran, and Syria. Hezbollah provides specialized training in the use of standoff weapons such as ATGMs, MANPADS, and rockets.

Hamas has procured weapons and ammunition with the help of Hezbollah, Iran, and Syria. It also has manufactured Qassam rockets and a variety of IEDs. Getting weapons into Gaza is difficult. They must enter either through tunnels from Egypt or over the Mediterranean shore, which is closely monitored by the IDF. Hamas’ rocket capabilities in 2008 are shown in Table 2, and their range into Israel is shown in Figure 3.

Table 2: Hamas Rockets in 2008

	Qassam-1	Qassam-2	Qassam-3	Grad	WS-1E
Length (cm)	~80	~180	~200	283	294
Diameter (mm)	~60	~150	~170	122	122
Weight (kg)	~5.5	~32	~90	72	74
Payload (kg)	0.5	5-9	10-20	18	18~22
Range (km)	3-4.5	8-9.5	10-12	18-20	34-45

Figure 3: Range of Hamas Rockets in 2008

Source: Rocket and Population Map, 21 Jan 2009, at <http://idfspokesperson.com/2009/01/21/rocket-and-population-map-21-jan-2009/>, accessed May 21, 2011.

Moving large rockets via the tunnels is challenging, and the larger 122-mm Grad rockets reportedly have to be disassembled into four pieces to enable their transit. The indigenously produced Qassam rockets suffer from limited accuracy, poor reliability, and short shelf lives. None of the rockets used by Hamas are guided; as with Hezbollah, the goal is simply to hit Israel.²⁸ The introduction of Grads and longer-range rockets is an important development because of their militarily significant payloads; the fact that they will put over one million citizens in range (including the towns of Ashkelon and Ashdod) and put critical infrastructure at risk (ports, a desalination plant, and a major electric power plant). The recent fall of the Egyptian government may make more and better weapons available across the Egyptian border.

Hamas, however, has several key military limitations when compared to Hezbollah, as demonstrated during Israel's offensive into Gaza during Operation Cast Lead (December 2008 to January 2009). First, they do not have Hezbollah's quality and quantity of weapons. Second, there is an inherent terrain constraint in Gaza that limits Hamas' operational depth and ability to use standoff, direct-fire weapons, e.g., ATGMs. Additionally, the ground is generally flat and open; the only complex terrain is in urban areas, which are relatively easy to isolate. Third, Israeli intelligence agencies have a much clearer understanding of Hamas, and targeting of key assets and individuals is much more effective than in Lebanon.

Operation Cast Lead

Operation Cast Lead was an operation with carefully limited objectives, designed to create conditions for a better security situation in southern Israel, by the following:

- Inflicting severe damage to Hamas

- Decreasing terror and rocket attacks from Gaza
- Increasing Israel's deterrence while minimizing collateral damage and avoiding escalation on other fronts
- Desiring an end state of long-term cessation of terror attacks from the Gaza strip.²⁹

Operation Cast Lead began with a weeklong air campaign that began on December 27, 2008, when 88 IAF strike aircraft hit 100 preplanned targets in 220 seconds.³⁰ The air campaign was followed up a week later with a ground operation consisting of four combined arms maneuver brigades. Three of these brigades (Paratroopers, Golani, Givati) rapidly pushed Hamas fighters out of their prepared positions and into Gaza City. The fourth brigade (401st “Tracks of Iron” armor brigade) cut off Gaza City from the supply routes from the Egyptian border. Israel also called up reserve units for Cast Lead. On January 18, 2009, an Egyptian-brokered ceasefire went into effect and the IDF withdrew from Gaza. Israel believes it met its principal objectives of harming Hamas and increasing its deterrence.

Why are Hezbollah and Hamas important?

Hezbollah and Hamas are important for several reasons. First, they both pose a clear and increasingly potent threat to Israel, a state whose security the United States has underwritten since its founding in 1948. This is a largely contextual issue related to the overall Palestinian question. Until it is resolved, the threat to Israel from Hezbollah and Hamas will likely continue. Thus, it is somewhat unique. Second, Hezbollah and Hamas might also represent a category of potential adversaries—state-sponsored hybrid adversaries—that the United States itself could encounter in the future. Indeed, one might see these types of actors emerge from the ongoing turmoil in North Africa and the Middle East, or elsewhere. These actors would be nationalistic, Islamic, and potentially more subject to being influenced, and perhaps supported, by regional actors—like Iran—than by the West. Finally, both show the relatively rapid transition an irregular actor can make in military capability with outside state assistance. Thus, Hezbollah and Hamas provide insights into the four questions that framed the May 17–18, 2011, Global Trends and the Future of Warfare 2025 workshop. Each will be addressed in turn.

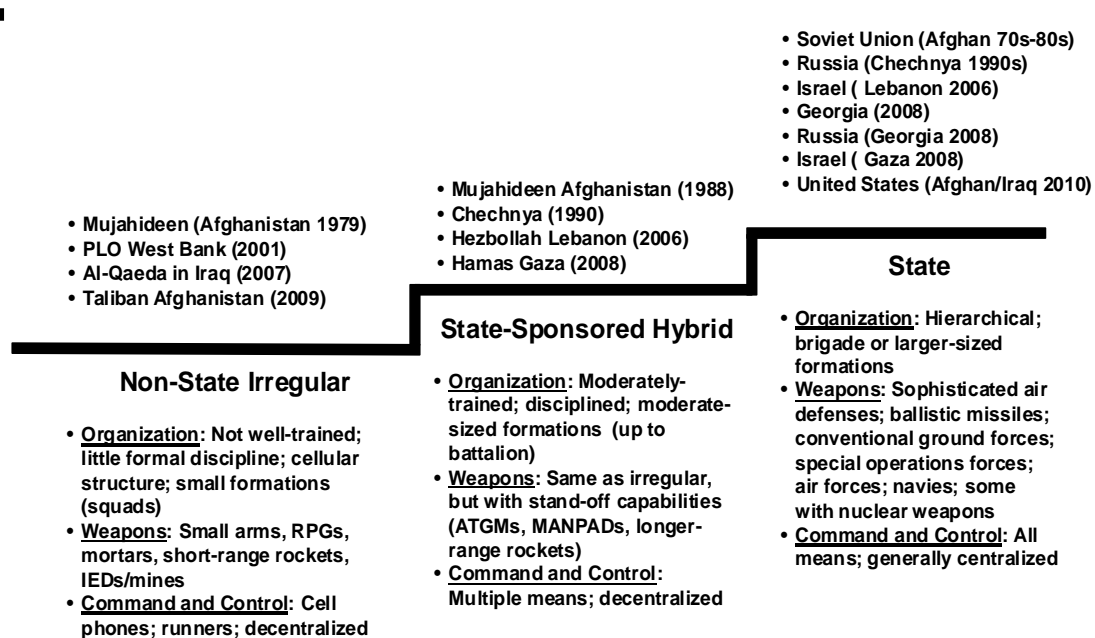
What features of war and warfare in the present can we expect to persist into the future, and which can we expect to fade or transform into something new?

Hezbollah and Hamas show that there is a “middle area” in the range of military operations between irregular warfare and state conflict. These state-sponsored hybrid adversaries create a *qualitative* challenge, despite their *smaller size*, because of their:

- Training, discipline, organization, and command and control
- Standoff weapons (ATGMs, MANPADS)
- Use of complex terrain (natural and/or urban) and fighting among the people.

Figure 4 shows this category of adversary relative to irregular and state actors.

Figure 4: Types of Adversaries with Characteristics and Historical Examples



State-sponsored hybrid adversaries, like Hezbollah, have acquired effective standoff weapons: rockets, mortars, ATGMs, MANPADS, and even shore-to-ship cruise missiles and unmanned aerial vehicles (UAVs). They are generally trained, disciplined, and cohesive forces that operate in a semi-centralized manner to avoid detection and attack, but can use terrain and urban areas to construct challenging defenses and hinder access.

What the IDF realized during the 2006 Second Lebanon War is that hybrid, state-supported adversaries like Hezbollah present a qualitative problem that is not scale dependent and that “precision, standoff fires are critical, but not sufficient, to cope with hybrid warfare opponents, particularly if they are operating ‘among the people.’”³¹

Furthermore, hybrid adversaries force changes to operational concepts that are relevant to irregular opponents. For example, because the adversary has MANPADS, the ability to use helicopters will likely be limited. This will constrain the ability of light forces to operate and will increase reliance on ground lines of communication. Heavy forces—with their protection, off-road mobility, and firepower—are key in this ATGM and RPG-rich environment. That said, the absence of advanced air defenses means that fixed-wing air power will still be able to operate with relative impunity above MANPADS range and, consequently, will become the key means for finding and attacking high-value targets (e.g., medium and long-range rockets, cruise missiles), destroying UAVs, and preventing the adversary from massing forces or resupplying forward units.

Irregular adversaries require state sponsorship to make the transition to hybrid capabilities. Consequently, providing advanced weapons to a non-state actor is clearly a policy decision for a state, because the source of the weapons will likely be traced back to them. This was the case when

the United States provided Stinger MANPADS to the Mujahideen during the Soviet occupation of Afghanistan. There seems to be a public perception that these weapons, particularly MANPADS, are available on the black market if one has the money to buy them. Although it may be possible to buy a small number of weapons to create an “event,” i.e., shooting down a commercial airliner, it is not possible to attain an operational capability without state support.³² Military capability, like that possessed by Hezbollah in Lebanon, requires weapons, a supply chain, and training. Or, as in the case of the Chechen militants who confronted the Russians in the 1990s, the weapons and trained operators were left behind when the Soviet Union broke up. Either of these origins of hybrid capability is possible in the future, particularly in the changing landscape in the Middle East and North Africa.

Interestingly, the capabilities Hezbollah employed in the 2006 Second Lebanon War have not shown up in Afghanistan or Iraq, presumably because Iran and Syria have decided not to provide them.³³ Thus, preventing the transfer of these standoff capabilities to non-state irregular actors to prevent them from becoming hybrid adversaries should be central to how we think about deterrence regimes in the future.

What current, emerging, or foreseeable social, economic, and political trends, within and beyond the traditional security arena, will drive changes in warfare and conflict over the next 15-20 years?

One of the key characteristics about Hezbollah and Hamas is that they are not insurgencies. They are nationalistic, Islamist political parties that also have military capabilities. Their goal, in addition to securing historical Palestinian territory, is to obtain political power. One could speculate that emerging Middle Eastern and North African regimes may look more like Hezbollah and Hamas than Western democratic states and that they might turn to other Islamic powers, for example Iran, for support. Indeed, as recent events in the Middle East have shown, the United States has, not surprisingly, found its interests mixed, if not conflicted. It supports repressive regimes such as those in Bahrain and Saudi Arabia, while also recognizing and assisting internal rebellions as it has in Egypt and Libya.

How is American thinking on the evolution of modern warfare perceived internationally?

This question is perhaps best answered by comparing how Israel was perceived before and after the 2006 Second Lebanon War. Like the United States now, Israel before that war was largely convinced that the era of major wars with large ground forces was past and that “the main challenge facing land forces would be low intensity asymmetrical conflicts.”³⁴ The IDF’s interpretation of US air operations in Kosovo and the opening stages of the wars in Afghanistan and Iraq convinced it that standoff attack by precision fires (principally air power), enabled by advanced intelligence, surveillance, and reconnaissance (ISR) can deter the state or defeat its adversaries. This was highly attractive at the time and promised lower IDF casualties, a key domestic consideration; less collateral damage than ground operations, which was vital for managing international and regional opinion; and budgetary savings. Furthermore, since 2000, the Israeli Army had been highly stretched by the demands of dealing with the second *al-Aqsa intifada* terrorist attacks inside Israel.

The IDF became highly competent at LIC and largely shut down the *intifada*. In the process, however, Israeli ground forces became largely incapable of the combined arms fire and maneuver operations needed to contend with a hybrid adversary like Hezbollah. Thus, Israeli ground forces

looked incompetent and suffered unnecessary casualties that only heightened this perception in Israel and the region.

The US military is perhaps not that different from the IDF in 2006: It has highly reliant air power to deter state adversaries while its ground forces have adapted to the irregular challenges in Afghanistan and Iraq. Former US Secretary of Defense, Robert M. Gates, reinforced this view recently during a speech at West Point: “Looking ahead, though, in the competition for tight defense dollars within and between the services, the Army also must confront the reality that the most plausible, high-end scenarios for the US military are primarily naval and air engagements—whether in Asia, the Persian Gulf, or elsewhere.”³⁵ It is worth remembering that the IDF employed elements of five divisions in Lebanon because of the size of the operational area and the complexity of the terrain. If the mission is to clear dispersed and hidden adversaries from complex terrain in an area the size of Southern Lebanon—roughly 45 km deep and 45 km wide—significant numbers of ground forces are needed.

One could reasonably assume that America’s potential adversaries have gone to school on the Second Lebanon War and will seek to adapt their capabilities to avoid US strengths. Indeed, the tactics used by the Serbs in Kosovo and those thus far employed by Colonel Muammar el-Qaddafi’s forces in the current stalemated conflict in Libya show that an adaptive adversary can avoid Western military strengths by blending into the population or using complex terrain to hide forces.

There is also the sense, at least in Kosovo and thus far in Libya, made explicit by statements from Western political leaders, that there is little stomach for introducing ground forces into these types of conflicts. What the IDF learned in Lebanon was that a determined, adaptive adversary can avoid targeting and attack from the air if it is not forced to react to pressure on the ground by competent land forces capable of combined arms fire and maneuver. Operation Cast Lead showed that they learned from the Lebanon experience.

Operation Cast Lead also shows the limited options a state has in dealing with committed adversaries with hybrid capabilities. Israel faced three broad military options when confronted with the continued rocket attacks from Gaza: 1) do nothing, 2) execute a large-scale operation to defeat Hamas (and own Gaza again), or 3) execute a limited operation to damage Hamas and deter it from future rocket launches. These options are not that different from those that the United States might face in future security environments. Indeed, Edward Luttwak and Martin van Creveld have both argued that Israel’s bombing during the Second Lebanon War did achieve the desired strategic effect of damaging and deterring Hezbollah. During Operation Cast Lead, Hezbollah stayed silent and even disavowed responsibility for a small number of rockets fired from Lebanon.³⁶ Luttwak views this reliance on US/Israeli high-end capabilities as a solution for problems in the future, extending his argument to Afghanistan:

The better and much cheaper alternative [in Afghanistan] would be to resurrect strategic bombing in a thoroughly new way by arming the Taliban’s many enemies to the teeth and replacing US troops in Afghanistan with sporadic airstrikes. Whenever the Taliban concentrate in numbers to attack, they would be bombed. This would be a most imperfect solution. But it would end the costly futility of ‘nation-building’ in a remote and unwelcoming land.³⁷

Nevertheless, what does seem clear is that America’s potential adversaries understand Western capabilities and are adapting.

What new concepts and doctrine for future warfare are emerging among current and prospective violent actors (both states and non-states) around the world?

The United States has not faced the challenges posed by hybrid adversaries since the Vietnam War. The US military, largely like the IDF before 2006, has adapted its ground forces to irregular warfare, with the expectation that its dominance in high-end, air-centric warfare is what is needed for future high-end challenges. One should expect future adversaries to go to school on the 2006 Second Lebanon War and attempt to acquire standoff fire capabilities, both direct (e.g., ATGMs, MANPADS, and shore-to-ship missiles) and indirect (e.g., rockets and mortars), that are concealable in complex terrain, particularly urban areas among civilian populations, to complicate their acquisition and attack from the air. These adversaries also believe, rightly or wrongly, that the quickest way to unhinge the strategies of Western military states is by creating large numbers of casualties, capitalizing on mistakes (e.g., bombing the wrong target, killing noncombatants) in the media, and protracting conflicts.³⁸

These types of adversaries are also capable of creating difficulties for ground forces, because they will use standoff weapons to expand engagement areas far beyond what irregular adversaries with lesser weapons are capable of, thus making it difficult to close with them. If precision guidance becomes available for indirect-fire weapons (e.g., rockets and mortars), the standoff fires challenge will only become more dire and make adversary anti-access operations even more problematic. What is essentially a close combat fight of generally less than a kilometer against an irregular adversary becomes a five (or more) kilometer combined arms fire and maneuver fight to get to close combat ranges with a hybrid adversary.

Concluding thoughts

In closing, there are several key points about the IDF's experiences with Hezbollah and Hamas that are relevant to the United States as it looks to the future. First, America's potential adversaries are working to counter US strengths with asymmetric approaches. Second, non-state hybrid adversaries are combining state capabilities with irregular organizations. This is not necessarily new. There was a hybrid war in South Vietnam during the Vietnam War, pitting US forces against well-armed Viet Cong insurgents and North Vietnamese Army units, largely armed and supplied by Russia and China. Third, although hybrid warfare is not a new phenomenon, we have not thought enough about how we are going to adapt our capabilities to deal with this problem, which is persistent for Israel and could become a problem for the United States and other nations. We have largely become a bipolar military: highly capable in irregular and state warfare, but with little recent experience "in the middle." Fourth, the likely challenges the United States will face in the future will require highly integrated air-ground-ISR capabilities whose tailoring must be highly relevant to the specific enemy and operational context to be effective. What worked on the West Bank against the *intifada* did not work in Lebanon; what toppled the regime of Saddam Hussein did not bring stability to Iraq. Clearly, we need to continue to develop the joint doctrines, processes, organizations, and interservice and interagency relationships that will enable success across the full range of military challenges.

¹ Frank G. Hoffman, *Conflict in the 21st Century: The Rise of Hybrid Wars*, Arlington, Va.: Potomac Institute for Policy Studies, 2007, 14.

- ² Frank, G. Hoffman, "Hybrid vs. Compound War, the Janus Choice: Defining Today's Multifaceted Conflict," *Armed Forces Journal* (October 2009).
- ³ Frank, G. Hoffman, 2009, 16.
- ⁴ Roger N. McDermott, "Russia's Conventional Armed Forces and the Georgian War," *Parameters* (Spring 2009), 65–80.
- ⁵ James N. Mattis, "USJFCOM Commander's Guidance for Effects-Based Operations," *Parameters* (Autumn 2008), 23.
- ⁶ Council on Foreign Relations, *Hezbollah*, at http://www.cfr.org/publication/9155/hezbollah_aka_hizbollah_hizbullah.html, accessed January 31, 2011, and US Department of State, "Foreign Terrorist Organizations," as of November 24, 2010, at <http://www.state.gov/s/ct/rls/other/des/123085.htm>, accessed February 31, 2011.
- ⁷ Council on Foreign Relations, 2010.
- ⁸ Augustus Richard Norton, *Hezbollah*, Princeton, N.J.: Princeton University Press, 2007, pp. 38–40. See also Naim Qassem, *Hizbullah: The Story from Within*, London: SAQI, 2005, p.p. 13–59; and Hala Jaber, *Hezbollah: Born With a Vengeance*, New York: Columbia University Press
- ⁹ Hala Jaber, *Hezbollah: Born With a Vengeance*, New York: Columbia University Press, pp. 50–51, 112–113, and Council on Foreign Relations, 2010.
- ¹⁰ Naim Qassem, *Hizbullah: The Story from Within*, London: SAQI, 2005, pp. 336–353.
- ¹¹ Qassem, *Hizbullah*, p. 49.
- ¹² For example, see "Who are Hezbollah?" BBC News, May 21, 2008, at http://news.bbc.co.uk/2/hi/middle_east/4314423.stm, accessed October 23, 2009.
- ¹³ Alastair Crooke and Mark Perry, "How Hezbollah Defeated Israel: Part 2: Winning the Ground War," *Asia Times*, October 13, 2006, at http://www.atimes.com/atimes/Middle_East/HJ13Ak01.html, accessed March 30, 2010. See also Yakov Katz, "IDF Declassifies Intelligence on Hizbullah's Southern Lebanon Deployment," *Jane's Defence Weekly*, July 9, 2010, at [http://www4.janes.com/subscribe/jdw/doc_view.jsp?K2DocKey=/content1/janesdata/mags/jdw/history/jdw2010/jdw43599.htm@current&Prod_Name=JDW&QueryText=%3CAND%3E%28%3COR%3E%28%28\[80\]%28+lebanon+%3CAND%3E+rockets%29+%3CIN%3E+body%29%2C+%28\[100\]+%28\[100\]%28+lebanon+%3CAND%3E+rockets%29+%3CIN%3E+title%29+%3CAND%3E+%28\[100\]%28+lebanon+%3CAND%3E+rockets%29+%3CIN%3E+body%29%29%29%29](http://www4.janes.com/subscribe/jdw/doc_view.jsp?K2DocKey=/content1/janesdata/mags/jdw/history/jdw2010/jdw43599.htm@current&Prod_Name=JDW&QueryText=%3CAND%3E%28%3COR%3E%28%28[80]%28+lebanon+%3CAND%3E+rockets%29+%3CIN%3E+body%29%2C+%28[100]+%28[100]%28+lebanon+%3CAND%3E+rockets%29+%3CIN%3E+title%29+%3CAND%3E+%28[100]%28+lebanon+%3CAND%3E+rockets%29+%3CIN%3E+body%29%29%29%29), accessed September 20, 2010. This article estimates that Hezbollah now (July 2010) has "30,000 guerrilla fighters—20,000 deployed in southern Lebanon—compared with 15,000 in 2006."
- ¹⁴ Amos Harel and Avi Issacharoff, *34 Days: Israel, Hezbollah, and the War in Lebanon*, New York: Palgrave Macmillan, 2008, 6.
- ¹⁵ Yehuda Wegman, "The Struggle for Situation Awareness in the IDF," *Strategic Assessment*, Vol. 10, No. 4, February 2008, 23.
- ¹⁶ For a brief discussion of IDF actions during and after the 2006 Second Lebanon War, see David E. Johnson, *Military Capabilities for Hybrid War: Insights from the Israel Defense Forces in Lebanon and Gaza*, Santa Monica, Calif.: RAND Corporation, OP-285-A, 2010. Open source materials indicate that Hezbollah has increased the quantity and quality of its rockets and has also continued preparing robust defenses in preparation for what many expect: the next round of the fight with Israel.
- ¹⁷ Jonathan Schanzer, *HAMAS vs. FATAH: The Struggle for Palestine*, New York: Palgrave MacMillan, 2008. *Hamas* is an acronym for the Arabic phrase *Haraka al-Muqawama al-Islamiyya*, "The Islamic Resistance Movement;" the word *hamas* also means "zeal" in Arabic.
- ¹⁸ Council on Foreign Relations, *Background: Hamas*, at <http://www.cfr.org/publication/8968>, updated August 2009, accessed November 17, 2009.
- ¹⁹ Khaled Hroub, *HAMAS: Political Thought and Practice*, Washington, D.C.: Institute for Palestine Studies, 2000, 272.
- ²⁰ Council on Foreign Relations, 2009.
- ²¹ Council on Foreign Relations, 2009.
- ²² Council on Foreign Relations, 2009. For a detailed discussion of the relationship between Hamas and Fatah, see Schanzer, 2008.
- ²³ Radio Free Europe/Radio Liberty, "Israel Threatens Punitive Measures Over Palestinian 'Unity' Accord," April 28, 2011.

²⁴ Council on Foreign Relations, 2009.

²⁵ Intelligence and Terrorism Information Center at the Israel Intelligence Heritage & Commemoration Center (IICC), “*Hamas’s Military Buildup in the Gaza Strip*,” April 8, 2008, p. 11, at http://www.terrorism-info.org.il/malam_multimedia/English/eng_n/pdf/hamas_080408.pdf, accessed November 17, 2009.

²⁶ IICC, 2008, 10.

²⁷ IICC, 2008, 10–12.

²⁸ Alon Ben-David, “Iranian Influence Looms as Fragile Gaza Ceasefire Holds,” *Jane’s Defence Weekly*, January 22, 2009; and Yiftah Shapir, “Hamas’ Weapons,” *Strategic Assessment*, Vol. 11, No. 4, 2009, at <http://www.inss.org.il/publications.php?cat=21&incat=&read=2648&print=1>, accessed August 18, 2009. Shapir presents a detailed discussion of the rockets available to Hamas.

²⁹ Discussions with IDF officers in Tel Aviv, February 10–12, 2009, in Washington, D.C., and in Tel Aviv, September 2–10, 2009.

³⁰ Barbara Opall-Rome, “In Gaza, Both Sides Reveal New Gear,” *Defense News*, January 5, 2009, at <http://www.defensenews.com/story.php?i=3885990>, accessed September 24, 2009.

³¹ Johnson, 2010, 8.

³² See Christopher Bolkcom and Bartholomew Elias, *Homeland Security: Protecting Airlines from Terrorist Missiles*, Washington, D.C.: Congressional Research Service, 2006.

³³ David E. Johnson, “Iran’s Counter-Strike,” *Providence Journal*, February 25, 2010, accessed at <http://www.rand.org/commentary/2010/02/25/PJ.html>.

³⁴ “The Winograd Report: The Main Findings of the Winograd Partial Report on the Second Lebanon War,” Haaretz.com, January 5, 2007. As of March 1, 2009: <http://www.haaretz.com/hasen/spages/854051.html>.

³⁵ Robert M. Gates, “Speech, United States Military Academy, February 25, 2011,” at <http://www.defense.gov/speeches/speech.aspx?speechid=1539>, accessed May 1, 2011.

³⁶ In this regard, see Edward Luttwak, “In Praise of Aerial Bombing,” *Foreign Policy*, March/April 2010, at http://www.foreignpolicy.com/articles/2010/02/22/in_praise_of_aerial_bombing, accessed June 1, 2010, and Martin van Creveld, “Israel’s War with Hezbollah Was Not a Failure,” *The Jewish Daily Forward*, January 30, 2008, at <http://www.forward.com/articles/12579/>, accessed May 28, 2010.

³⁷ Luttwak, 2010.

³⁸ Israeli casualties during the Second Lebanon War—120 soldiers dead and over 1,000 wounded—were a serious domestic issue. During Operation Cast Lead the numbers were much lower: Ten dead (four from friendly fire) and 207 soldiers wounded, 19 severely.

Tomorrow's Security Challenges: The Defense Implications of Emerging Global Trends

US National Intelligence Council

Introduction: Emerging Global Trends

In November 2008, the National Intelligence Council published *Global Trends 2025: A Transformed World*, an unclassified assessment of long-term trends shaping the future geopolitical landscape.¹ This study identified a number of emerging trends that will affect significantly the character and direction of the future security environment over the next 15 to 20 years, including:

- The current international system is being transformed into a global multipolar one where the gaps in national power between developed and developing countries will continue to narrow.
- The relative power of non-state actors—businesses, tribes, religious organizations, and even criminal networks—will also increase.
- The United States will remain the single most powerful country but will be less dominant in the future international system.
- A shift in relative wealth and economic power roughly from West to East is underway, and the current economic crisis is accelerating a global economic rebalancing, creating considerable risk of instability for developing countries with large account deficits.
- Future global economic and population growth will put pressure on energy, food, and water resources.
- Climate change is expected to exacerbate resource scarcities.
- Asia, Africa, and Latin America will account for virtually all the population growth over the next 20 years and states with significant youth-bulges, such as Afghanistan, Nigeria, Pakistan, and Yemen, will remain ripe for continued instability unless employment conditions in those states change dramatically.
- Terrorism will likely continue, but its appeal could lessen if economic growth continues in the Middle East and youth unemployment is reduced. For those terrorists that remain active, the diffusion of technologies puts increasingly dangerous capabilities within reach.
- Rapid changes in the Middle East, including nuclear proliferation and the spread of lethal capabilities, increase the potential for conflict.

While the Global Trends report identifies these trends as relative certainties about the future, it also notes a number of key uncertainties that make it difficult to provide a single characterization of the future security environment. The report concludes that a “rapidly changing international order at a time of growing geopolitical challenges increases the likelihood of discontinuities, shocks and surprises. No single outcome seems preordained.”

¹ The report is available at www.dni.gov/nic/NIC_2025_project.html.

Two Critical Uncertainties about the Future

Among the many uncertainties about the future, there are at least two that are critical to the character of the future global geopolitical environment about which we can now only speculate but which nonetheless will have a significant impact in the determination of the security challenges the United States will face in the future:

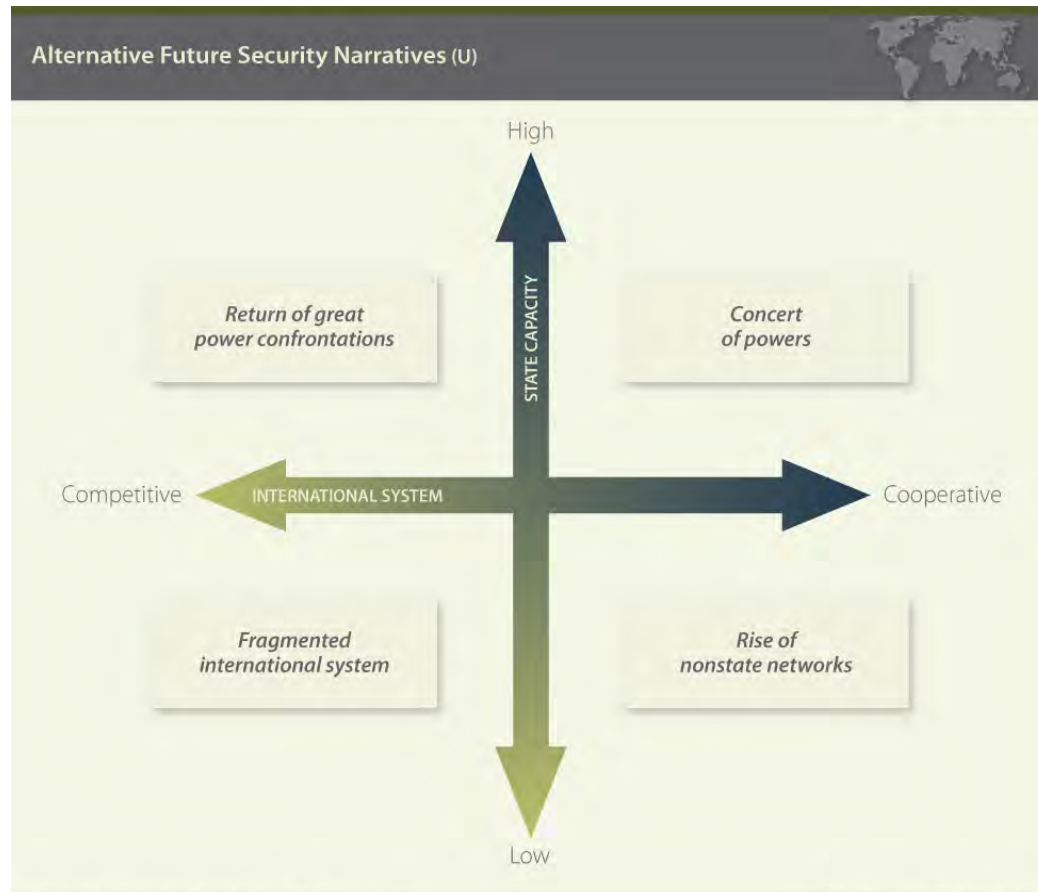
- The future capacities of key states in international system, in terms of governance, political influence, wealth, and relative military power.
- The future character of the international system and the relationships between major powers.

The first uncertainty deals with the role of the nation-states in the future international system. Specifically, will the leading nation-states have the capacity to manage the number of transnational challenges that are likely to emerge in the future or will a prolonged global economic downturn and an increasingly decentralized world erode their ability to cope with these challenges? The second uncertainty questions the nature of the future international system itself. Will, for example, the multiplicity of important actors add strength to the international system or will it fragment it, fostering competition and incapacitating international cooperation on key security challenges?

These two uncertainties, depicted graphically on perpendicular axes, suggest a framework for conceptualizing alternative future security environments in 2025 and implications for US security

interests (see figure on following page). In the upper right quadrant of our matrix, the *Concert of Powers* scenario postulates a multipolar security environment where the leading states cooperatively tackle transnational security challenges. In the lower left quadrant, the *Fragmented International System* scenario describes an environment in which the diversity of key global actors leads to a disjointed, ineffectual approach to managing security challenges such as nuclear proliferation.

In the lower right quadrant, the *Rise of Non-state Networks* describes an environment in which decreasing state capacity increases the difficulty for governments in managing issues such as resource scarcities, ethnic tensions, and income inequalities prompting nonstate networks to fill the vacuum. Finally, the *Return of Great Power Confrontation* scenario postulates an environment in which emerging powers assert their growing political, economic, and military clout in a global competition for strategic resources and influence.



- The ***Concert of Powers*** scenario describes a future where the growing number of powerful states strengthens the international community's ability to deal with future security challenges, creating opportunities for the United States and its allies to forge new multilateral security partnerships.
- The ***Fragmented International System*** scenario postulates a security environment in which the diffusion of global power makes it more difficult for the international community to achieve consensus on managing global security challenges such as nuclear proliferation, terrorism, and energy security.
- The ***Rise of Non-state Networks*** scenario envisions a future in which the dispersion of power and authority away from nation-states gives rise to a myriad of security challenges involving sub-national and transnational entities.
- In the ***Return of Great Power Confrontations*** scenario, the future security environment is defined by increasing competition between rising and status quo global powers for resources, markets, and influence.

Alternative Scenarios for the Future Security Environment

The following scenarios describe alternative security narratives for world of 2025 depending upon which combination of trends identified in the *Global Trends 2025* report come to dominate in the future international environment. For each scenario the factors that would drive international developments towards that scenario are identified and the security challenges resulting from the scenario are discussed.

- The following four scenarios are intended to illustrate—not to predict—how a range of security challenges might materialize in the future depending upon the interplay of emerging global trends.²

Multilateral Security ...

In the *Concert of Powers* scenario, emerging and developed powers worked cooperatively in managing a variety of transnational security challenges. This scenario postulates that the growing number of powerful states strengthens the international community's ability to deal multilaterally with future security challenges. In this scenario, the United States is one of a number important

² Many of the trends identified in *Global Trends 2025* report are present in each scenario but only in some scenarios do they result in significant security challenges. Future demographic trends, indicating aging societies in many developed countries and significant youth populations in parts of the developing world, for example, are assumed in every scenario but are only assessed to create significant security challenges in scenarios where there are limited government capacities to address the societal needs and security issues resulting from these demographic changes.

powers but its leadership remains critical in forging new multilateral security partnerships to tackle a variety of transnational security issues. Such partnerships would likely not be formal strategic alliances but rather coalitions of key state powers agreeing to work cooperatively to address particular security issues such as peacekeeping, maritime security, and counterproliferation.

- Current and recent examples of multilateral approaches to security challenges such as the Six-Party Talks, the Proliferation Security Initiative, and the anti-piracy operations in the Gulf of Aden become the models upon which future multinational security efforts are based in this scenario.

Driving Trends. The emergence of a multipolar world in which multilateral security cooperation becomes the norm would likely be preceded by the developments in the international system intended to successfully accommodate the strategic interests of rising global powers. Multilateral institutions, such as the United Nations and the International Monetary Fund, in this scenario would adapt their structure and performance to accommodate the interests of emerging powers and the increasingly multipolar geopolitical environment. Rising global powers, such as China, in turn would view their future economic well-being as tied to geopolitical stability incentivizing them to work cooperatively with the international community in addressing security challenges that could impact global economic growth.

- This scenario assumes that potential sources of significant state

competition such as competition over access to energy resources are mitigated. In this scenario, competition for energy resources ease as a result of new energy-producing technologies, lower energy demand as a result of increased efficiencies, and the exploitation of newly discovered oil and gas fields that counterbalances the rising energy needs of rising powers such as China and India.

- This scenario also postulates continued stability in key energy-producing states, especially those in the Middle East. A stable Middle East emerges in this scenario as a result of improving security conditions in Iraq, Afghanistan, and Pakistan; reduced levels of terrorism; international cooperation on containing nuclear weapons proliferation; and new educational, financial, and social policies that encourage higher levels of economic growth and employment in the region.
- In this scenario Iran is dissuaded from pursuing destabilizing nuclear weapon capabilities by a combination of international diplomatic initiatives, technological impediments, an improved security environment, and the desire by Tehran to avoid political isolation and seek greater integration into the global economy.

Key Security Issues. US security challenges in this scenario are mainly defined by operations other than war and by the issues associated with changing foreign perceptions of the US role as a global security provider.

The security environment of 2025 that emerges in this scenario is the most benign of the four presented in this paper in terms of direct threats to US and allied interests. The accommodation of emerging powers into existing multilateral institutions and the incentives created for preserving global economic growth suggests the likelihood of significant interstate conflicts would remain low in this environment. In addition, although terrorism would not completely disappear in this scenario, the threat it poses would be significantly diminished as a result of improved multilateral cooperation on counter-terrorism activities and increased stability in the Middle East. The growing divergence between rich and poor in this scenario does, however, create additional burdens for governments that could lead to societal disruptions and conflict if not managed effectively.

- Global security challenges such as proliferation, terrorism, and energy security unite rather than divide the great powers in this scenario.
- The primary requirement for employing US and allied military forces in this security environment would be in operations other than war, frequently as part of a multinational coalition.
- This security environment would emphasize US and allied military capabilities for conducting humanitarian assistance, disaster relief, peacekeeping and peace enforcement operations, non-combatant evacuations, maritime security missions, counter-drug and counter-proliferation operations, and

security assistance, including training, to friendly foreign military forces.

While traditional threats to US interests decrease in this scenario, the changes to the future geopolitical landscape that are postulated could have a profound impact on how the world perceives the future role of the US military and US security commitments. As the international system adapts to accommodate rising powers there would likely be accompanying expectations by those powers for a greater role in addressing security interests within their own perceived spheres of influence.

Or Competing Spheres of Influence?

The *Fragmented International System* scenario postulates a security environment in which the diffusion of global power increases the difficulty for the international community in achieving consensus on how to manage global security challenges such as proliferation, terrorism, and energy security. In addition, varied interests among the principal actors in a multipolar world increase competition and tensions as states seek to strengthen their own spheres of influence. These dynamics result in a breakdown of the global order into regional and other blocs ushering in an era of slower economic growth and globalization and ineffectiveness in dealing with transnational security challenges.

Driving Trends. This scenario assumes that lagging economic growth and burden fatigue reduce the West's capacity to manage wide-ranging global challenges while the quest for greater inclusiveness in existing international organizations increases the difficulty of

achieving consensus on key security issues. In this future, a prolonged global economic downturn leads to a loss of confidence in Western institutions resulting in rising powers exhibiting a higher degree of freedom in customizing their own policies. This trend is reinforced by the inability of multilateral institutions to adapt sufficiently to accommodate the interests of emerging powers.

- In this scenario, multinational forums, such as the G-20 process, unravel as their members become unwilling to make compromises that would allow consensus, resulting in a set back for multilateralism.
- The challenges of aging societies in Western Europe and Japan drive budget allocations in those states in this scenario towards social and welfare programs and away from spending on defense and military operations, further eroding the West's capacity to manage transnational security issues.
- NATO faces increased challenges to its ability to mount sustained future security operations in this scenario resulting from financial and material burdens created by its long-term military commitment to Afghanistan and the demographic challenges and slow economic growth confronting many of its member countries.

Competing security interests and lack of consensus on managing transnational security issues by the major state powers creates the conditions for further proliferation of nuclear and advanced conventional weapons capabilities in this scenario. In addition, the challenges of

acquiring and maintaining modern conventional military capabilities in an era of limited economic resources causes some states to place increasing emphasis on nuclear weapons for deterring and responding to large-scale conventional military attacks.

Key Security Issues. Nuclear proliferation, shifting power dynamics, and potential for conflict in the Greater Middle East dominate US security interests in this scenario. A breakdown of the international cooperation on proliferation that leads to a more proliferated world will likely have the greatest impact in the Middle East where Iran's pursuit of a nuclear weapon capability and the shift in the balance of power in the region raise the potential for conflict and further proliferation. Of significant concern is that an Iranian nuclear weapon, or the perception by other countries that Iran has acquired a nuclear weapon capability, will embolden Iran and prompt a regional arms race or other military responses that destabilizes the region.

Growing Irregular Warfare Challenges ...

The ***Rise of Non-state Networks*** scenario envisions a future security environment in which the dispersion of power and authority away from nation-states gives rise to a myriad of security challenges involving sub-national and transnational entities. The problem of coping with these "global troubles" including the spread of violent extremism, transnational terrorism and crime, food and water scarcities, failing states, and intrastate conflicts drives the future security agenda.

Driving Trends. This scenario postulates a prolonged global economic downturn and an increasingly decentralized world leading to the dispersion of power and authority away from nation-states and fostering the growth of sub-national and transnational entities. While states generally seek to cooperate on security issues in this future they often lack the capacity alone to resolve persistent problems such as food and water scarcities, ethnic rivalries, poverty, and environmental degradation.

- The United States continues to be called upon to be the primary provider of economic and security assistance to weakened governments in this environment because it is unclear if developing powers, such as China and India, are willing or able to take on this responsibility.

Demographic trends indicate that significant portions of the populations in parts of Africa, the Middle East, and South and Southeast Asia will be less than 30 years old in 2025.³ These "youth bulges" combined with high unemployment, resource scarcities, and disruptive political successions increases the prospect for instability in this scenario. The West Bank/Gaza, Iraq, Yemen, Saudi Arabia, Afghanistan and Pakistan will especially have large youth populations that in this scenario, where there is broad unemployment and insufficient government capacities, become ripe for fostering volatility and violence. Nigeria, Democratic Republic of Congo, and Ethiopia also experience rapid youth population growth and continuing civil conflict in this future.

³ *Global Trends 2025: A Transformed World*; National Intelligence Council, November 2008.

- A failure to achieve a two-state solution in this scenario places increasing domestic pressures on Israel as it tries to manage the security situation in the West Bank and Gaza where the combined population will grow to nearly six million, mostly youthful, people by 2025. In addition, Israeli Arabs, currently about a fifth of the population, will comprise nearly a quarter of Israel's population by 2025.⁴

In this scenario, significant migration from rural to urban areas and from poorer to richer countries occurs and is fueled by a widening gap in economic and physical security in adjacent areas. By 2025, over half the world's population lives in urban areas and another eight mega cities are created, most in Asia and Sub-Saharan Africa. Muslims from Africa and the Middle East continue to migrate to Europe shifting the ethnic composition in many areas particularly around cities. The lack of economic opportunities and difficulties in assimilating these immigrant communities in this future lead to increased tensions and episodes of violence reminiscent of the 2005 Paris suburban riots.

- Migration and forced displacement are further prompted by significant climatic events, environmental degradation, and food and water scarcities as a result of changing climate conditions.

The lack of capacity of many governments to manage sufficiently the

challenges in this scenario prompts the emergence of non-state networks to fill the vacuum. Increasing interconnectedness, as a result of advancing communication and information technologies, enables individuals to coalesce around common causes across national boundaries. In some situations these new networks act as forces for good by pressuring governments through non-violent means to address injustice, poverty, the impact of climate change and other social issues. Other groups, however, use networks and global communications to proliferate radical ideologies, manipulate public opinion, recruit and train fighters for their cause, coordinate terrorist attacks, and organize criminal activities.

- Turmoil and societal disruptions generated by resource scarcities, poor governance, ethnic and religious rivalries, and forced displacements of populations create conditions conducive to the spread of civil unrest, radicalism, terrorism, and insurgencies.
- Diasporas, non-governmental organizations (NGOs), ethnic groups, religious organizations, and other non-state actors acquire significant power in this scenario and establish formal and informal relationships with states.
- Transnational criminal networks grow in this scenario and expand their traditional involvement in narcotics trafficking to include managing global resources such as energy, minerals, and other strategic markets.

⁴ *Global Trends 2025: A Transformed World*; National Intelligence Council, November 2008.

- Piracy continues to flourish along key maritime traffic routes adjacent to land areas lacking sufficient government and law enforcement capabilities such as in the Gulf of Aden.

Key Security Issues: The challenges posed by violent extremism, transnational terrorism and criminal networks, intrastate conflict, stabilization and reconstruction operations, failing states, and irregular forms of warfare dominate the US security agenda in this future. This scenario suggests that many of the future security problems will emanate from parts of Africa, the Middle East, and South and Southeast Asia, and Central and South America and spread to other parts of the world via transnational networks. The persistence and wide-ranging character of these problems, however, threatens to create operational overload of military forces, especially US and allied ground forces that might be frequently called upon to respond to these security challenges, and engagement fatigue among the public of countries providing these forces.

- This security environment emphasizes US and allied capabilities for conducting counterterrorism, counterinsurgency, special operations, stability and reconstruction operations, urban conflict, critical infrastructure protection, and homeland security.

Or High End Asymmetric Threats?
In the *Return of Great Power Confrontations* scenario the future security environment is defined by increasing competition between rising and status quo global powers for

resources, markets, and influence. In some cases these competitions lead to interstate confrontations. Although total war involving massed force-on-force military clashes among the great powers is still unlikely, conflicts involving limited military objectives and warfare through non-military means, such as information, economic and resource warfare, become more prevalent in this environment.

Driving Trends. This scenario postulates that future global economic growth leads to an unprecedented transfer of wealth and economic power roughly from West to East. Existing international institutions, however, can not adapt successfully to the changing geopolitical landscape, leading to some countries to want to challenge the Western-led global order.

- Emerging powers in this scenario increasingly lack confidence in global institutions such as the United Nations to resolve emerging security challenges and to protect their interests.
- Lagging Western growth prompts protectionist measures against faster-growing emerging powers leading to resentment and competition in the international system.

Rising energy demands of growing populations and economies bring into question in this scenario the availability, reliability, and affordability of energy supplies. Energy producers that scaled back investments in energy infrastructures during earlier economic downturns can no longer keep pace with rising demands as the global economy recovers. Perceptions of energy scarcity

drive states to take actions to assure their future access to energy supplies.

- Nationalist sentiments rise as states perceive themselves to be in an intense competition for influence, markets, and resources in this zero-sum world.
- New strategic relationships develop between energy deficient and energy rich states including increasing codependency of Russia and Europe over energy, Chinese efforts to strengthen political and security ties to Saudi Arabia and other Gulf states, and growing Indian influence and involvement in the Middle East and Central Asia.
- Middle East states, looking to diversify their security relationships and reduce their reliance on the United States, seek to increase their political and economic ties with Europe, China, Russia, and India leading to a strategic competition among several powers for influence and access to energy resources in the region.
- China increases its political and security relations in this scenario with countries in the littoral areas adjacent to its key energy sea lines of communications, such as Pakistan, Sri Lanka, and Myanmar, to obtain their support for future Chinese naval operations in these areas.
- Balance of power dynamics emerge in this future that resembles a 21st century replay of the years before 1914 with major powers developing networks of friendly states through security arrangements, arms

transfers, and economic relationships to secure their interests and constrain the actions of potential rivals.

Evolving competitions for energy security are increasingly supported by military capabilities raising the potential for heightened tensions and even conflict. In this scenario, for example, the leading powers use the benefits of their growing economies to engage in naval and military buildups and modernization efforts to protect critical economic assets and to secure access to energy resources prompting increased tensions, rivalries, and counterbalancing. These buildups raise concerns about the future of maritime security in a zone extending from the Persian Gulf to East and Southeast Asia.

- A naval arms race in Asia occurs in this scenario in response to China's development of naval power projection, including the development of aircraft carriers and "anti-access" capabilities such as attack submarines and antiship ballistic missiles that become widely viewed as efforts by Beijing to extend its political influence in the region and to deter attempts to cut off China's sea-borne energy supplies by threatening mutual disruption of sea trade as a consequence.
- Different interpretations of maritime sovereignty and permissible activity by foreign vessels in Exclusive Economic Zones lead to future incidents at sea such as the March 2009 incident between Chinese vessels and the USNS *Impeccable* in the South China Sea.

- The Indian Ocean by 2025 becomes a common operating area for nuclear-armed submarines from several countries including India, China, and Pakistan that have only limited experience in conducting such patrols, increasing the risk of accidents or unintended incidents between and among naval powers in the region.
- Mutual suspicions regarding the intentions behind naval build-ups by potential regional rivals and the establishment of maritime security alliances that exclude key players undermine efforts to achieve broad international cooperation on maritime security in this scenario.

Key Security Issues. The primary US security challenges in this scenario stem from foreign competition for strategic resources, markets and influence; military buildups and disputed assertions of sovereignty, and threats to access to the “global commons.” Energy security is increasingly militarized in this scenario, and growing “resource nationalism” heightens interstate tensions and raises the potential for conflict over disputed energy resources. To the extent that traditional security issues remain unresolved in this future, they now assume new political-security dimensions in the context of growing resource and military competitions among the major powers.

Perceptions of energy scarcity might drive countries to take action to assure their future access to energy supplies. In the worst case, this could lead to interstate conflicts if government leaders deem assured access to energy resources

to be essential to maintaining domestic stability and the survival of their regime. However, even actions short of war will have important geopolitical implications as states undertake strategies such as developing new alliances and building up naval capabilities to hedge against the possibility that existing energy supplies will not meet rising demands.

- Advances in exploration and drilling technologies might create new opportunities to find and exploit previously unexplored ultra-deep oil fields. Such fields, however, may be located in areas of contested ownership, such as Asia or the Arctic, creating the potential for conflict.
- In May 2009, the Kremlin published a document regarding the national security of the Russian Federation until 2020. It noted that the attention of international policy over the long term would be focused on sources of energy reserves and listed the Middle East, the shelf of the Barents Sea, other areas in the Arctic, the Caspian basin, and Central Asia as among those sources. The document further stated that in the face of the competition for resources, the use of military force could not be excluded.⁵

⁵ *Strategy of National Security of the Russia Federation until 2020*, <http://www.scrf.gov.ru>

